# D-25/250

# SERVICE MANUAL

*US Model*
*Canadian Model*
*D-25*

*AEP Model*
*UK Model*
*E Model*
*Australian Model*
*D-250*

Discman

## SPECIFICATIONS

| | |
|---|---|
| **CD section** | |
| System | Compact disc digital audio system |
| Laser diode properties | Material: GaAlAs<br>Wavelength: 780 nm<br>Emission duration: Continuous<br>Laser output: Less than 44.6 μW<br>* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block. |
| Error correction | Sony Super Strategy Cross Interleave Reed Solomon Code |
| D-A conversion | 16-bit linear, 4 fs digital filter |
| Frequency response | 20–20,000 Hz ±1 dB * |
| Dynamic range | More than 90 dB * |
| Signal-to-noise ratio | More than 85 dB |
| Wow and flutter | Below measurable limit * |
| Outputs (at 9 V input level) | Line output (stereo minijack)<br>Output level 0.7 V rms at 50 kilohms<br>Load impedance over 10 kilohms<br>Headphones (stereo minijack)<br>9 mW + 9 mW at 32 ohms |

*Measured by EIAJ CP-307

*Measured by EIAJ CP-307

| | |
|---|---|
| **General** | |
| Power requirements | Supplied rechargeable battery pack BP-2 or BP-100 (optional)<br>DC IN 9 V jack accepts:<br>Supplied AC power adaptor<br>Sony CPM-100P car mount plate (optional) or Sony DCC-120A car battery cord (optional) for use on 12 V car battery |
| Power consumption | 1.9 W DC |
| Dimension | Approx. 125.8 × 20.8 × 134.6 mm (5 × 27/32 × 5 3/8 in.) (w/h/d) not incl. inclined part (depth), projecting parts and controls<br>Approx. 127.3 × 24.1 × 136.2 mm (5 1/8 × 31/32 × 5 3/8 in.) (w/h/d) incl. projecting parts and controls |
| Weight | Approx. 380 g (13.5 oz), not incl. rechargeable battery<br>Approx. 460 g (1 lb) incl. rechargeable battery |
| Supplied accessories | AC power adaptor (1)<br>Rechargeable battery pack (1)<br>Carrying case (1)<br>Connecting cord (1) (stereo miniplug ⟷ two phono plugs) |

Note: Use only the supplied AC power adaptor or the recommended car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.

MICROFILM

**CAUTION**

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## COMPACT DISC COMPACT PLAYER

SONY®

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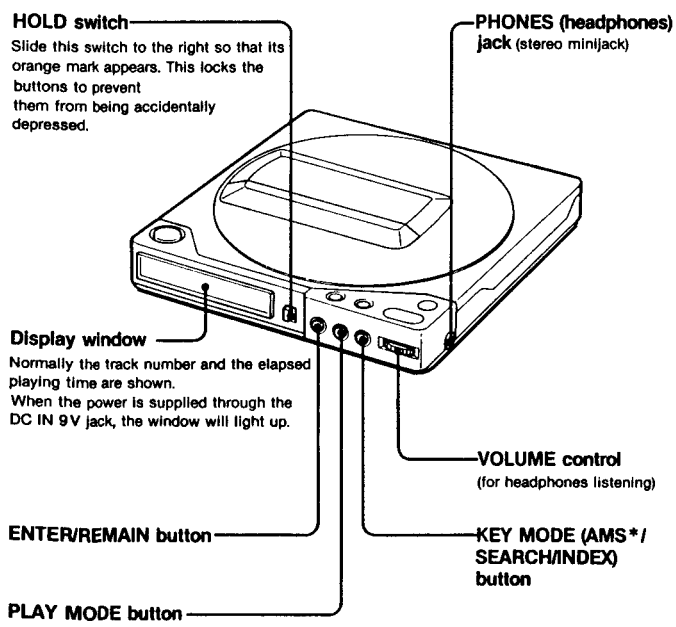
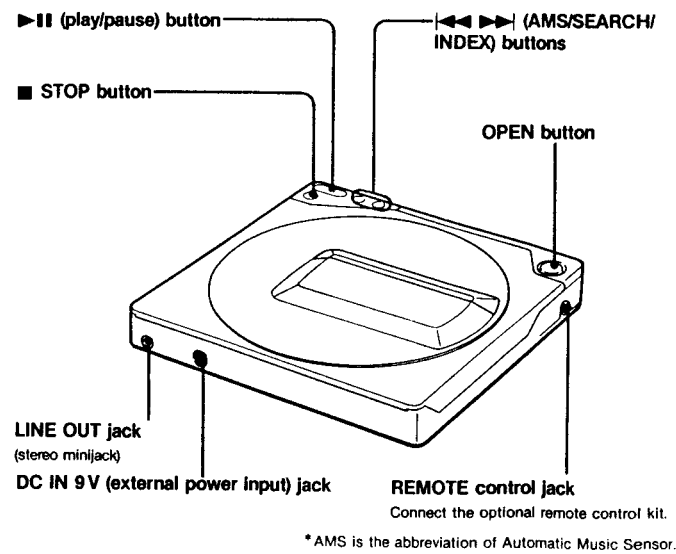
# SECTION 1
# GENERAL

## Location and Function of Controls


HOLD switch
Slide this switch to the right so that its orange mark appears. This locks the buttons to prevent them from being accidentally depressed.
PHONES (headphones) jack (stereo minijack)
Display window
Normally the track number and the elapsed playing time are shown.
When the power is supplied through the DC IN 9V jack, the window will light up.
VOLUME control
(for headphones listening)
ENTER/REMAIN button
KEY MODE (AMS*/ SEARCH/INDEX) button
PLAY MODE button




*AMS is the abbreviation of Automatic Music Sensor.

# SECTION 2
# SERVICING NOTES

## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

### Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at 270° ± 10°C during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as par the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block.
Note and specifications required to check are given below.

- FOK output: IC501 (9) pin
  When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 (24) pin.
- S carve P-to-P value: 2.95 Vp-p
- Adjusted part for focus gain adjustment: RV505
- RF signal P-to-P value: 0.75 – 1.4 Vp-p
- Traverse signal P-to-P value: 1.8 Vp-p
- The grating holder can not repair.
- Adjusted part for tracking gain adjustment: RV501

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

## NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

### Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S901 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.
The laser diode is checked using the current value which flows to the laser diode inside the UPF.

**Procedure 1** (service mode or normal operation)
Check the laser diode emission with the eye.

1. Open upper panel.
2. S901 on as Fig. 1.
   (In service mode, this operation is not necessary.)
3. Press the ▶II key.
   (In service mode, this operation is not necessary.)
4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus serarch. If it does not, APC circuit or UPF is defective.

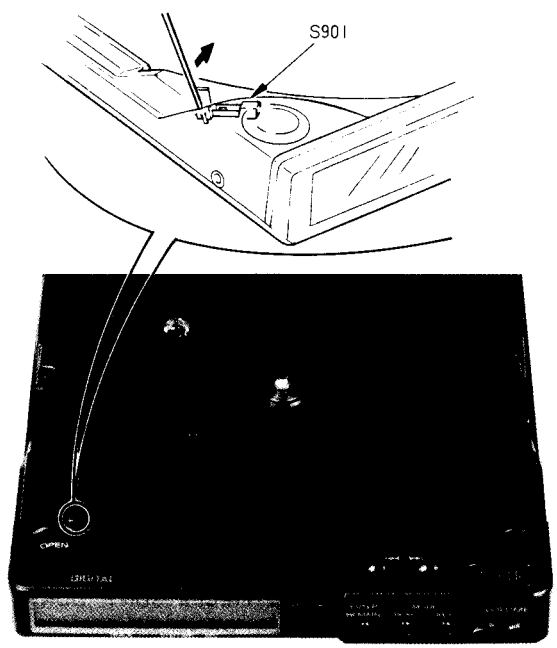
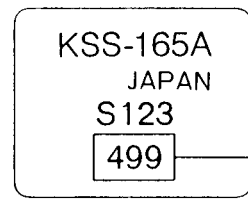



*Fig. 1 Turning S901 on*

**Procedrue 2** (service mode or normal operation)
Check by the curent with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the UPF.
   (Label on UPF)




   The current value varies with the set.
3. Connect a VOM as shown in Fig. 2.
4. Press the ▶II key.
5. Calculate the current by the VOM reading.
   VOM reading (V) ÷ 10 = current (A)
   ex. VOM reading = 0.49 V
   0.49 ÷ 10 = 0.049 (A) = 49 (mA)
6. Confirm that the ammeter reading is within the range given below.
   value on label $^{+5}_{-11}$ mA (25°C)
   variation relative to temperature:
   0.4 mA/°C
   (Current increases when temperature rises and decreases when it drops.)
   If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or UPF is defective.

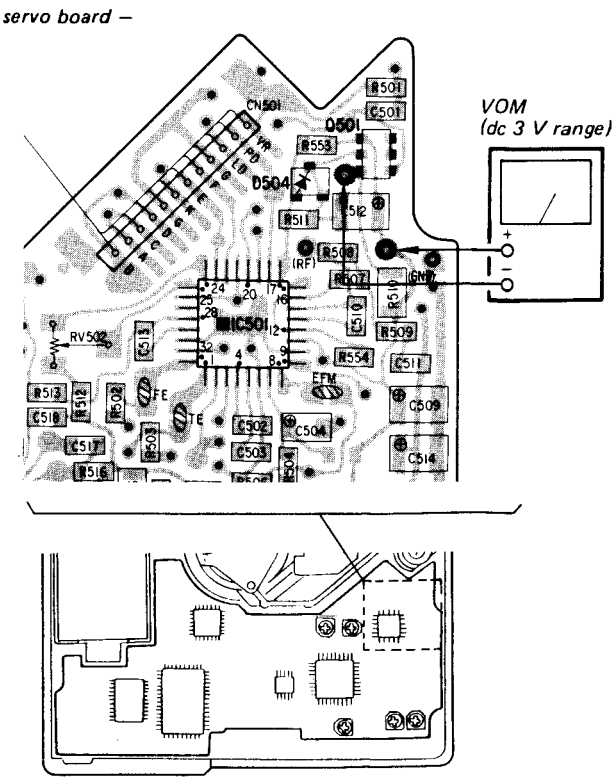
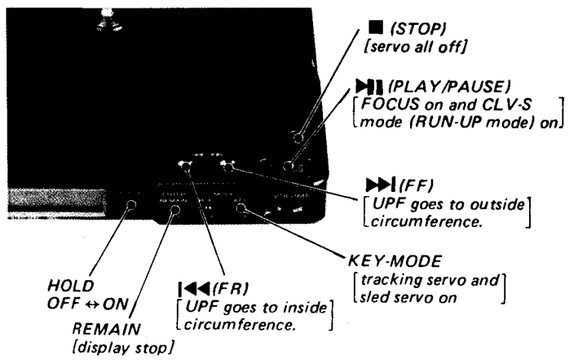



*Fig. 2 VOM Connection*

### SERVICE MODE (service program)

This set has built-in service program in the microcomputer as usual sets.
The operation method of service program is explained below.

[ ]: *Main operation in service mode for details, refer to step 2.*




*Be sure to set HOLD switch OFF.*
*If not key inputs can not be operated.*

*Fig. 3 Key Positions*

**Step 1 (Service Mode setting method)**

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the ▶II key.
2. Solder jumper TEST point.
   (IC801 pin (9) (BAT-E) pin is grounded.
3. Plug in external power supply.
   This puts the set into service mode.

**Step 2 (Service Mode operation)**

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
   With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When ▶▶I or I◀◀ key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When ▶II key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S901 are to be ON.
7. All servo (focus, tracking, sled and spindle) go off when ■ key is pressed. But disc motor continues rotating for a while by inartia.

**Step 3 (Service Mode release)**

1. First be sure to unplug the external power supply, then remove the TEST point solder jumper.
2. The set will now operated normally.

*— main board —*

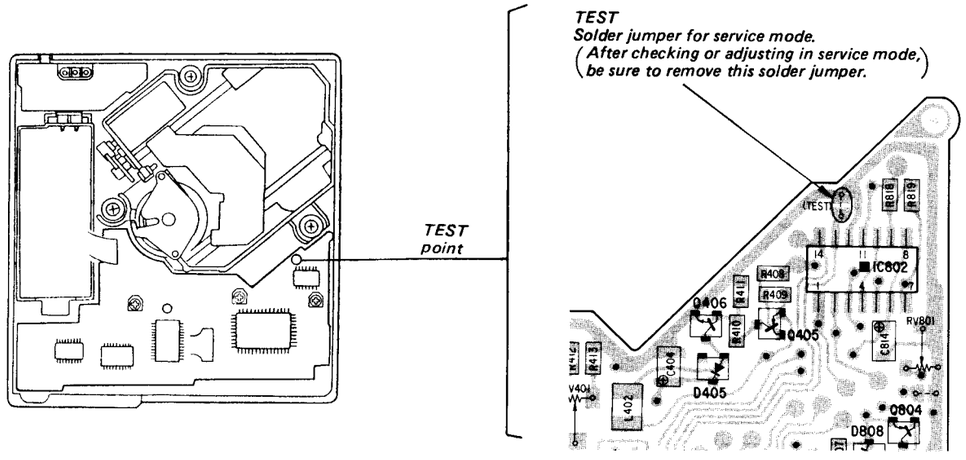



*Fig. 4 TEST Point Position*



# SECTION 3
# ELECTRICAL ADJUSTMENTS

**Notes on Adjustment**

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT and BATTERY DISPLAY ADJUSTMENT in service mode. Be sure to release service mode after completing adjustment.
   (Refer to "Service Mode (service program)" on page 5.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage: DC 9 V
   HOLD switch: OFF

### PREPARATION

Put the set into service mode (see page 5) and perform the following checks. Repair if there are any abnormalities.

- **Sled Motor Check**

1. Press the OPEN button and open the top panel.
2. Press the ▶▶I , I◀◀ keys and make sure that the UPF moves smoothly, without catching, from the inmost → outmost → inmost circumference.
   ▶▶I : UPF moves outward
   I◀◀ : UPF moves inward

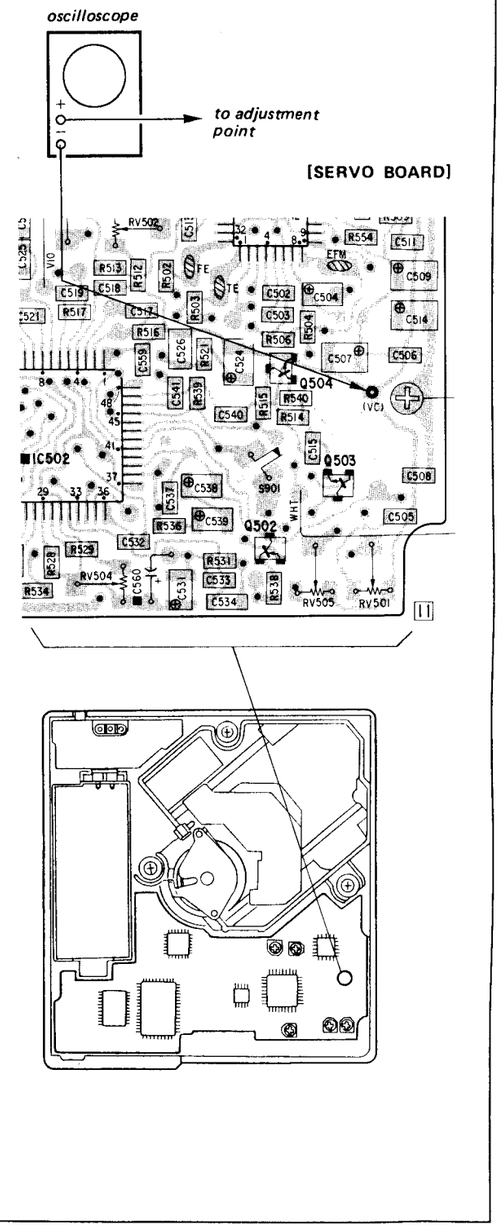
- **Focus Search Check**

1. Press the OPEN button and open the top panel.
2. Press the ▶II key. (Focus search is performed continuously.)
3. Observe the UPF objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the ■ key.
   Check that focus search operation stops. If it does not stop, press the ■ key again longer than before. But disc motor continues rotating for a while by inartia.

**VC (1/2 Vcc) Connecting Point**

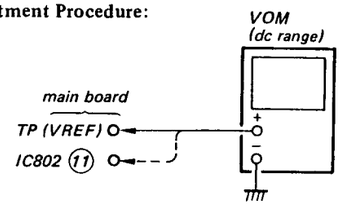
FOCUS BIAS ADJUSTMENT
TRACKING BALANCE ADJUSTMENT

When the adjustments above are performed, connect the ⊖ side of oscilloscope to the point below.



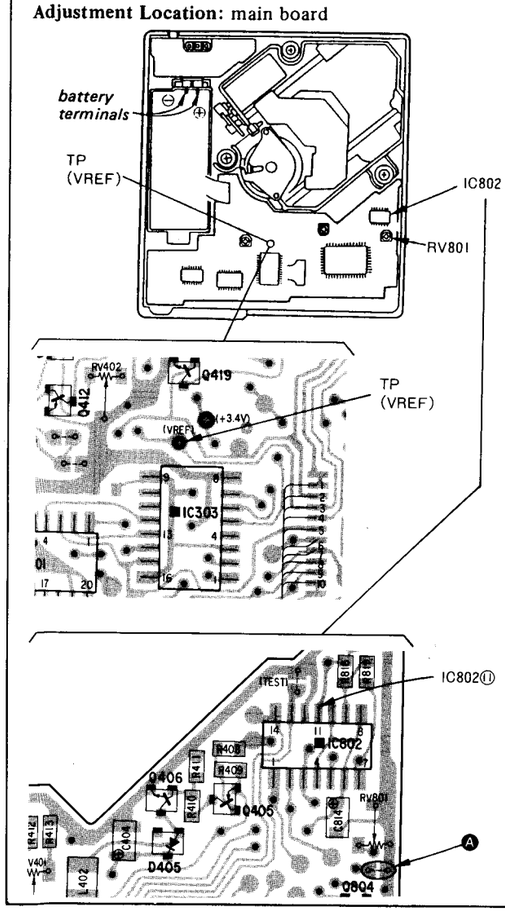
## Battery Display Adjustment

**Adjustment Procedure:**



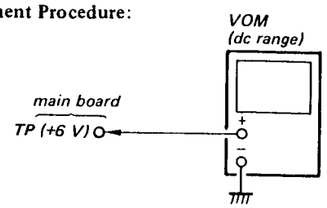

1. Apply dc +3.5 V to terminals for bult in battery (BP-2).
2. Insert the disc (YEDS-18) and put the set into play mode.
3. Adjust RV801 so that main board IC802 (11) voltage and TP (VREF) voltage are equal.
4. If IC802 (11) voltage is heigher than TP (VREF) voltage when turning the RV801 fully counter-clockwise, short the jumper point (A) as shown below and adjust RV801.

**Adjustment Location:** main board



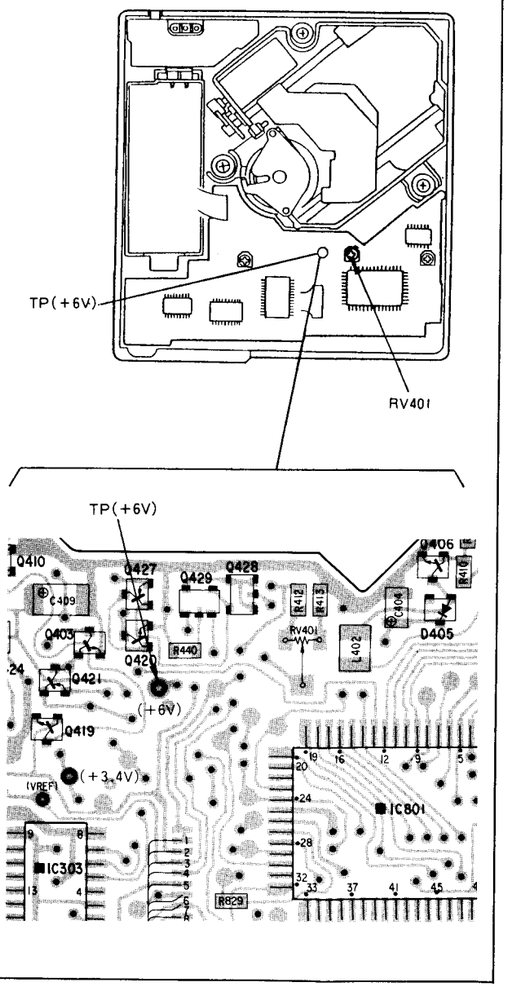

## +6 V Adjustment

**Adjustment Procedure:**




1. Put the set into service mode (see page 5).
2. Connect the VOM to main board TP (+6 V).
3. Adjust RV401 for +6 ±0.1 V reading on the VOM.
4. After adjustment, release service mode (see page 5).

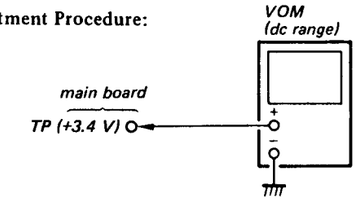
**Adjustment Location:** main board






## +3.4 V Adjustment

**Adjustment Procedure:**



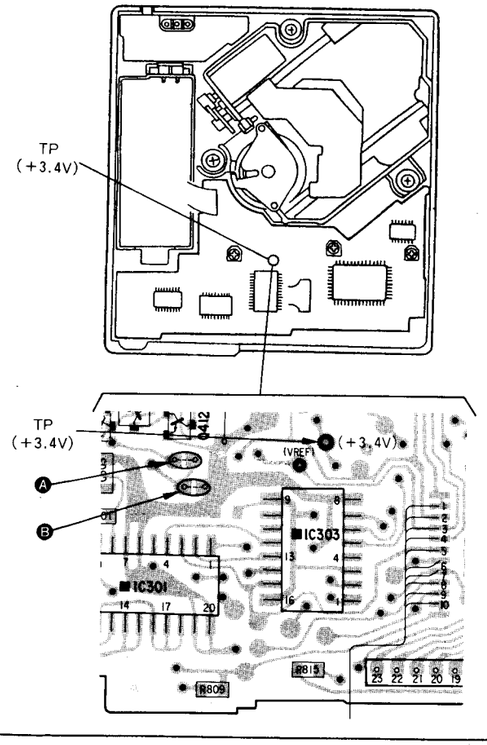

1. Put the set into service mode (see page 5).
2. Connect the VOM to main board test point TP (+3.4 V).
3. Adjust the pattern connecting ( Ⓐ or Ⓑ ) to obtain 3.4 to 3.55 V reading on the VOM.

| pattern connection | | VOM reading |
|---|---|---|
| Ⓐ | Ⓑ | |
| O | X | down |
| X | X | |
| X | O | |
| O | O | up |

O: short X: open

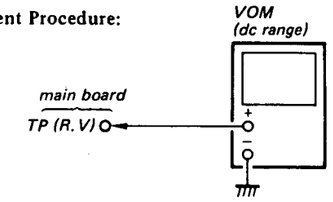
4. After adjustment, release service mode (see page 5).

**Adjustment Location:** main board




## Rechargeable Voltage Adjustment

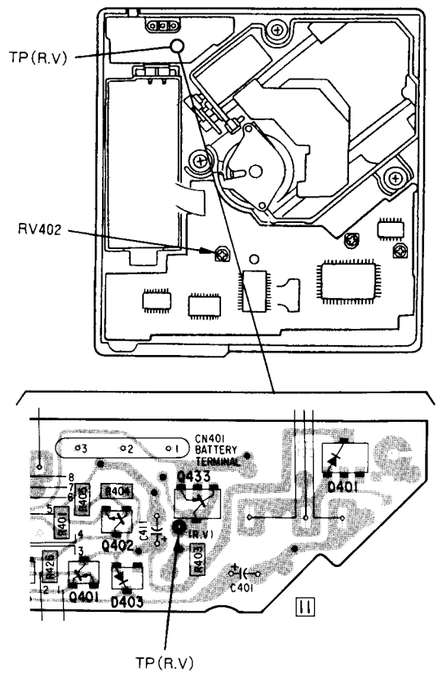
**Adjustment Procedure:**




1. Connect the VOM to main board test point TP (R.V).
2. Apply DC 9 V with requrated dc power supply from external power jack CN401.
3. Adjust RV402 for 7.05 – 7.5 V reading on the VOM.

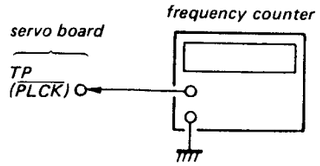
**Note:** Measure after the VOM reading becomes stable.

**Adjustment Location:** main board



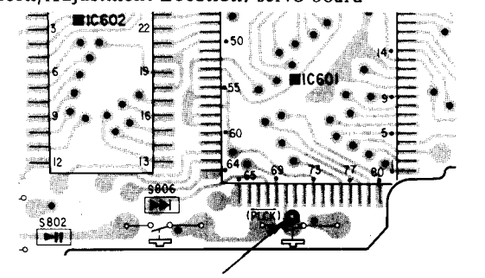
## PLL Free Run Frequency Check and Adjustment

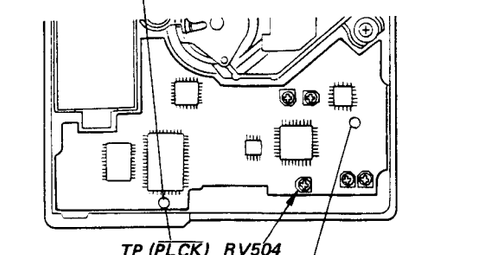
**Check/Adjustment Procedure:**



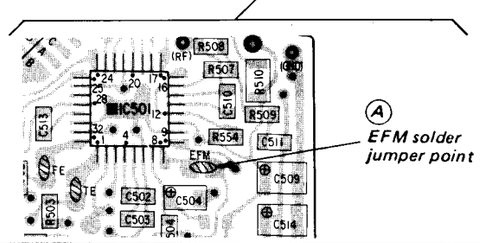

1. Disconnect the jumper point Ⓐ (EFM) in the diagram below.
2. Connect a frequency counter to servo board test point TP ($\overline{\text{PLCK}}$).
3. Put the set into service mode (see page 5).
4. Check that the frequency counter reading is 4.3218 ±0.01 MHz. If not, adjust RV504 so that it is 4.3218 ±0.01 MHz.
5. After adjustment, release service mode (see page 5).
6. Short the jumper point shorted in step 1.

**Check/Adjustment Location:** servo board



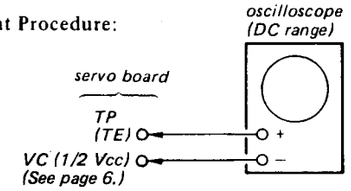

Ⓐ EFM solder jumper point
(Disconnect for checking and adjustment. Short after checking and adjustment.




## Tracking Balance Adjustment

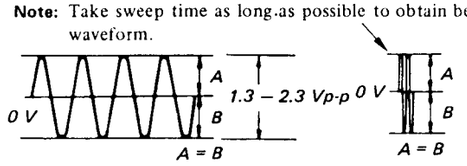
**Conditions:**
The set should be placed either horizontally.

**Adjustment Procedure:**



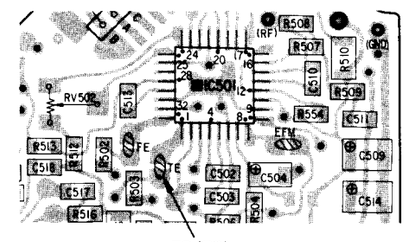

1. Connect the oscilloscope to servo board TP (TE).
2. Put the set into service mode (see page 5).
3. Press the ▶▶| and |◀◀ keys to move the UPF to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Adjust RV502 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

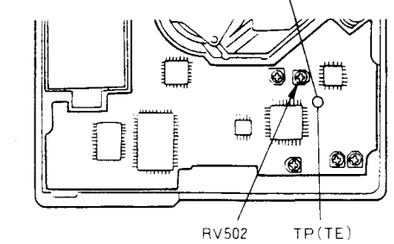
   **Note:** Take sweep time as long as possible to obtain best waveform.




7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 5).

**Adjustment Location:** servo board



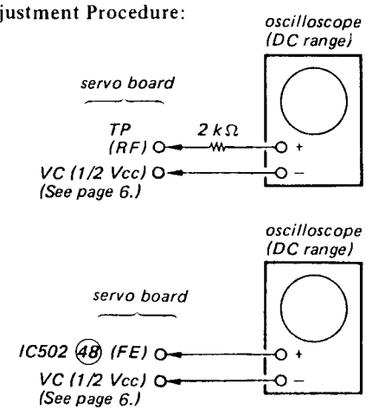






## Focus Bias Adjustment

**Conditions:**
The set should be placed either horizontally.

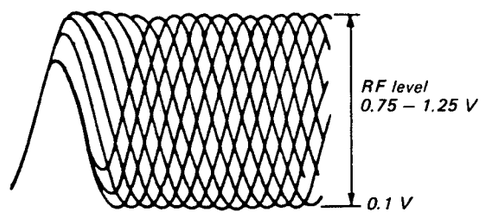
**Adjustment Procedure:**




1. Put the set into service mode (see page 5).
2. Connect the oscilloscope to servo board test point TP (RF).
3. Press the ▶▶| and |◀◀ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Press the KEY-MODE button. (Tracking and sled go ON.)
7. Adjust RV503 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

- **RF Signal Reference Waveform (eye pattern)**

*VOLT/DIV: 200 mV*
*TIME/DIV: 500 nS*



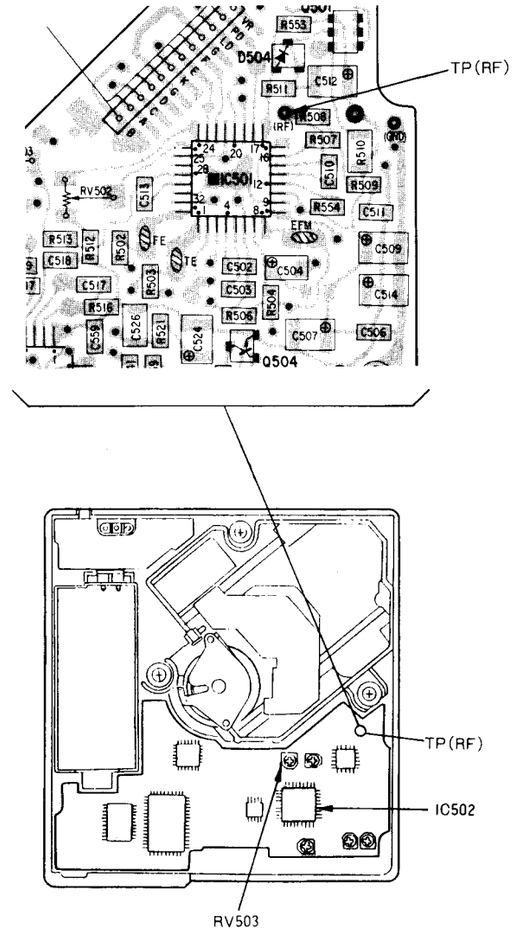

When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Unplug the external power supply to stop spindle motor from rotating and remove the disc.
9. Remove the disc and connect the oscilloscope to main board IC502 (48) (FE).
10. Adjust RV503 again refering to the table followed.

| oscilloscope reading | adjustment |
|---|---|
| more than +50 mV | Not adjust again. |
| +50 mV ~ +20 mV | Adjust RV503 again for +50 mV reading on oscilloscope. |
| +20 mV ~ –20 mV | Adjust RV503 again for –20 mV reading on oscilloscope. |
| less than –20 mV | Not adjust again. |

11. After adjustment, release service mode (see page 5).

**Adjustment Location:** servo board



Reference

### Focus/Tracking Gain Adjustment

A frequency responce analyzer or CD jig is necessary in order to perform this adjustment exactly.
However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perfrom this adjustment.
Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and metchnical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts:

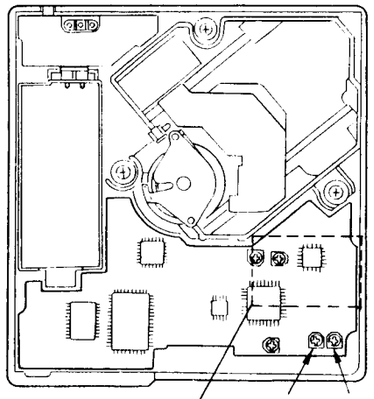
- optical pick-up block
- RV505 (focus gain VR)
- RV501 (tracking gain VR)

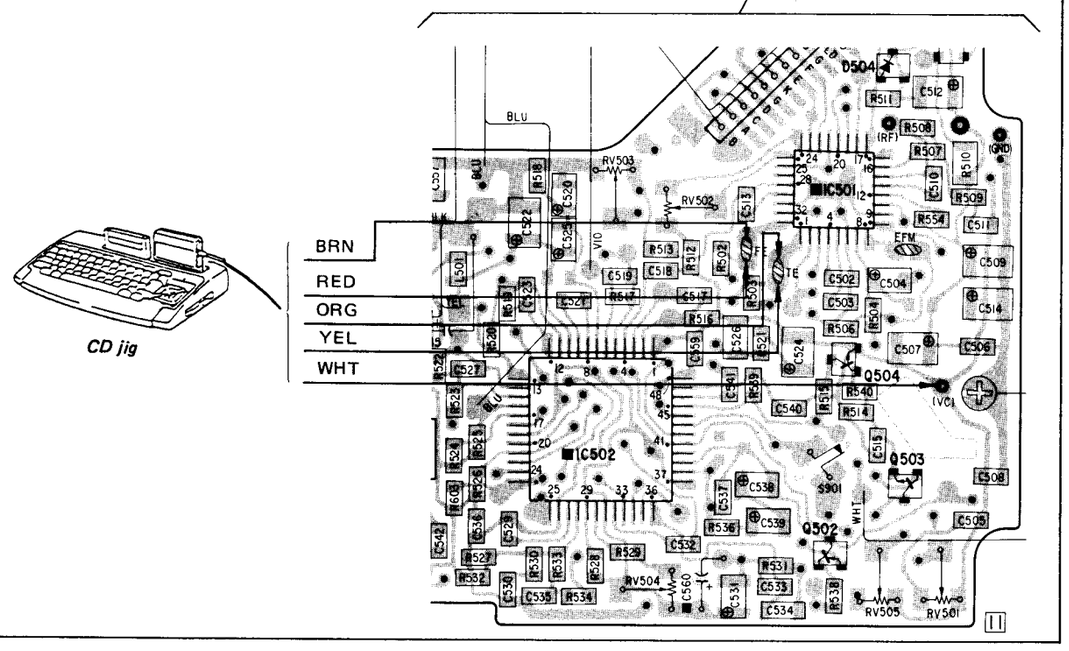
Be careful not to move RV505 (focus gain volume) and RV501 (tracking gain volume) ordinarily.

On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

**CD Jig Connecting Procedure:**
Remove the solder jumpers at the TE and FE locations and connect the DC jig.
(Connect the points on both TE and FE located on the side of IC501 to the output to the CD jig, and points located on the side of volumes to the input from the CD jig.)

*– servo board –*






# SECTION 4
# DIAGRAMS

## 4-1. WAVEFORMS

❶ PLAY : −1.6V
APPROX. 100mVp-p

❷ PLAY : −1.6V
APPROX. 500mVp-p

❸ PLAY :
1Vp-p
−2.4V
−0V

❹ 85nSEC
1.4Vp-p

❺ 80nSEC
2.4Vp-p

❻ 80nSEC
3.5Vp-p

❼ 9µSEC
3.4Vp-p

❽ 4.5µSEC

❾ 360nSEC
4.4Vp-p

❿ 150nSEC
3.4Vp-p

⓫ 100µSEC
3.4Vp-p

⓬ 100µSEC
3.4Vp-p

⓭ 42nSEC
2.6Vp-p

⓮ 42nSEC
1.8Vp-p

⓯ 5µSEC
3.4Vp-p

⓰ 10µSEC
3.4Vp-p

⓱ 4.5µSEC
4.1Vp-p

⓲ 210nSEC
4Vp-p

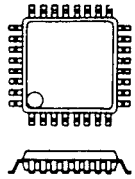
⓳ 210nSEC
4.4Vp-p

⓴ 2.5µSEC
1.4Vp-p
DURING FOCUS SEARCH

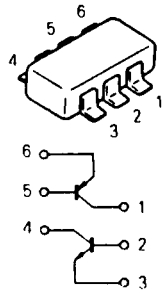
㉑ 3.4V
0.4V
4.5mSEC

## 4-2. SEMICONDUCTOR LEAD LAYOUTS

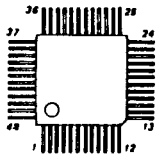
**CXA1271Q**



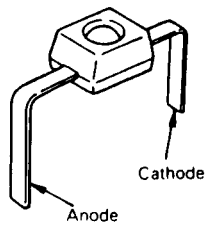
**IMD2**
**XN4609**



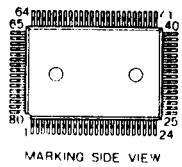

**CXA1272Q-Z**



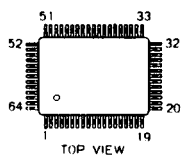
**SLM125YW**



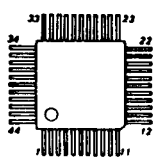

**CXD11250**




**CXP5086-047Q**




**MPC1715FU**



**Note on Schematic Diagram:**

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▬▬ : B+ Line
- ▭ : adjustment for repair.
- Voltages and waveforms and total current are measured with top panel closed.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground in service mode.
  no mark : stop
  ( ) : play
- Voltages are taken with a VOM (input inpedance 1 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD
- Switch

| Ref. No. | Switch | Position |
|---|---|---|
| S801 | ■ | OFF |
| S802 | ▶/❚❚ | OFF |
| S803 | PLAY MODE | OFF |
| S804 | REMAIN/ENTER | OFF |
| S805 | KEY MODE | OFF |
| S806 | ▶▶❙ | OFF |
| S807 | ❙◀◀ | OFF |
| S808 | HOLD | OFF |
| S901 | DOOR | ON |
| S902 | LIMIT | OFF |

See page 5 for setup of service mode.

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

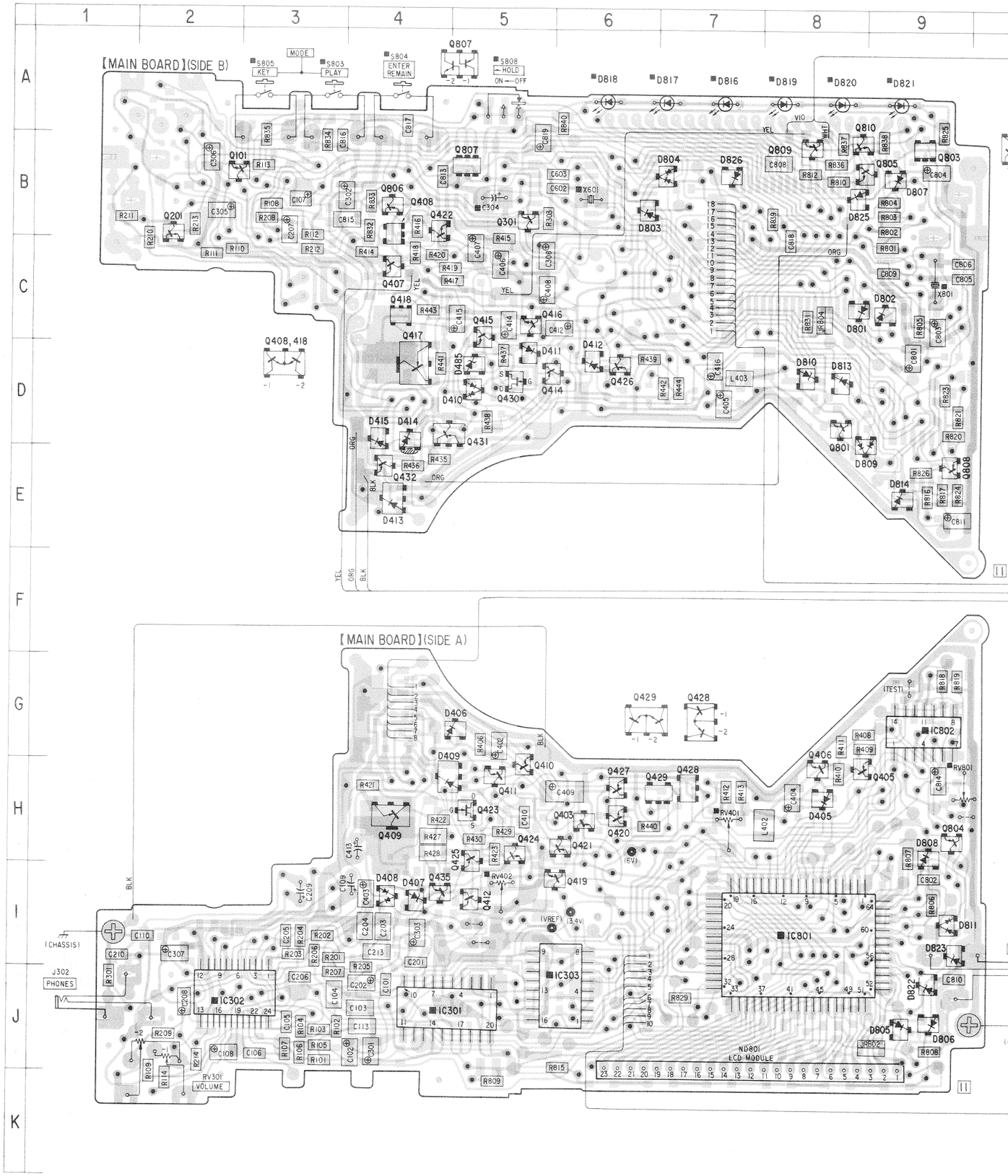
**Note on Mounting Diagram:**

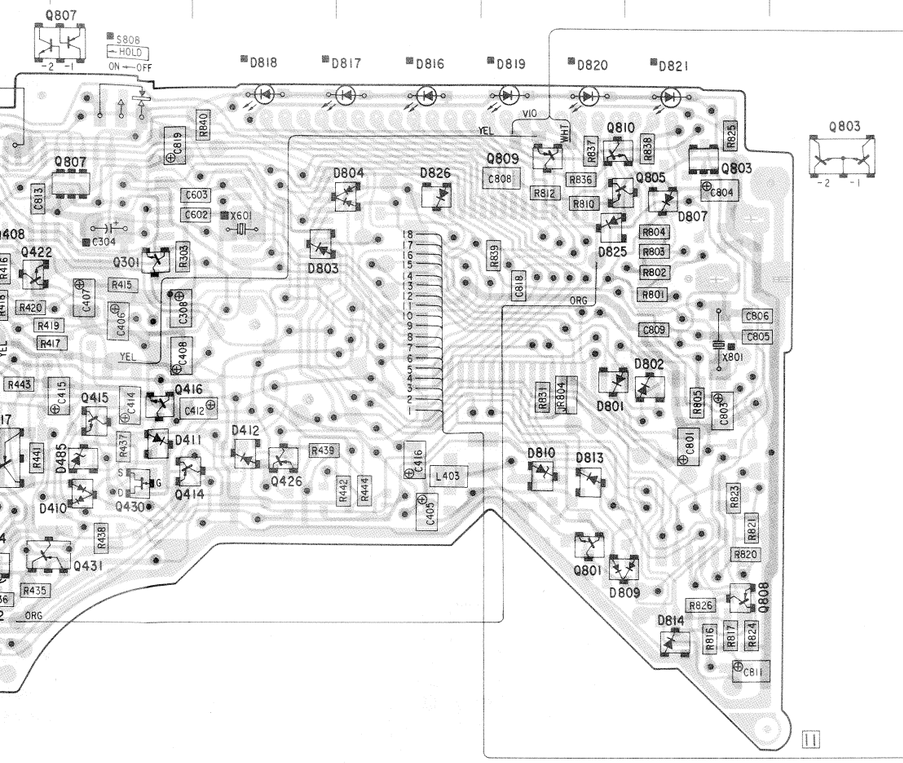
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- ○- - - : Components extracted from the rear side.

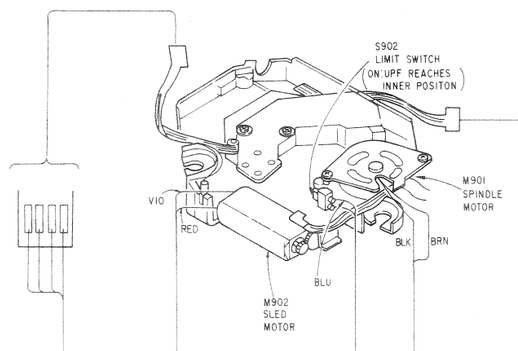
## 4-3. PRINTED WIRING BOARD

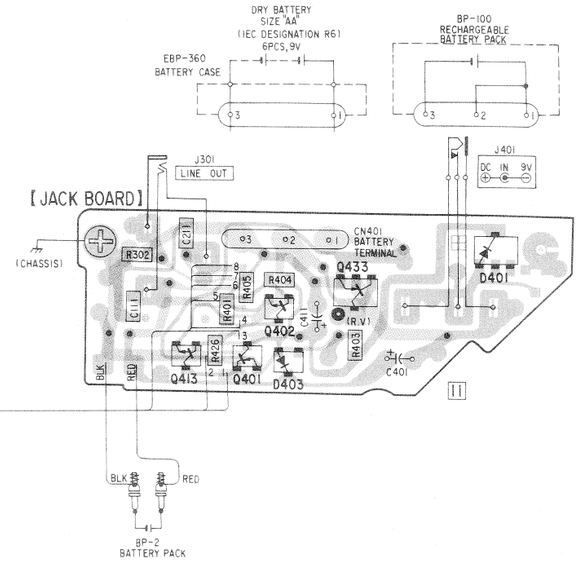
- **Semiconductor Location**

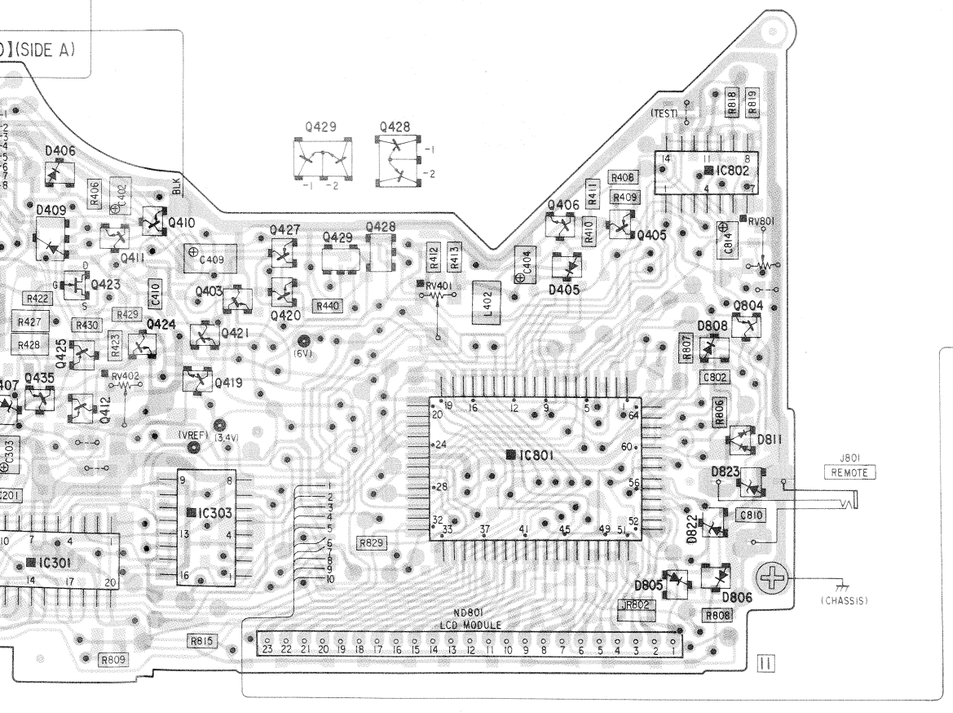
| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D401 | D-20 | Q101 | B-2 |
| D403 | D-18 | Q201 | B-2 |
| D405 | H-8 | Q301 | B-5 |
| D406 | G-5 | Q401 | D-18 |
| D407 | I-4 | Q402 | D-18 |
| D408 | I-4 | Q403 | H-6 |
| D409 | G-5 | Q405 | H-9 |
| D410 | D-5 | Q406 | G-8 |
| D411 | D-5 | Q407 | C-4 |
| D412 | D-6 | Q408 | B-4 |
| D413 | E-4 | Q409 | H-4 |
| D414 | D-4 | Q410 | H-5 |
| D415 | D-4 | Q411 | H-5 |
| D485 | D-5 | Q412 | I-5 |
| D501 | I-16 | Q413 | D-18 |
| D502 | I-16 | Q414 | D-5 |
| D503 | H-16 | Q415 | C-5 |
| D504 | G-19 | Q416 | C-5 |
| D801 | C-8 | Q417 | C-4 |
| D802 | C-9 | Q418 | C-4 |
| D803 | B-6 | Q419 | I-6 |
| D804 | B-7 | Q420 | H-6 |
| D805 | J-9 | Q421 | H-6 |
| D806 | J-9 | Q422 | B-4 |
| D807 | B-9 | Q423 | H-5 |
| D808 | H-9 | Q424 | H-5 |
| D809 | E-8 | Q425 | H-5 |
| D810 | D-8 | Q426 | D-6 |
| D811 | I-9 | Q427 | H-6 |
| D813 | D-8 | Q428 | H-7 |
| D814 | E-9 | Q429 | H-7 |
| D816 | A-7 | Q430 | D-5 |
| D817 | A-7 | Q431 | D-5 |
| D818 | A-6 | Q432 | E-4 |
| D819 | A-8 | Q433 | D-19 |
| D820 | A-8 | Q435 | I-4 |
| D821 | A-9 | Q501 | G-20 |
| D822 | J-9 | Q502 | J-19 |
| D823 | I-9 | Q503 | I-19 |
| D825 | B-8 | Q504 | I-19 |
| D826 | B-7 | Q801 | D-8 |
| | | Q803 | B-9 |
| IC301 | J-5 | Q804 | H-9 |
| IC302 | J-2 | Q805 | B-9 |
| IC303 | J-6 | Q806 | B-4 |
| IC501 | H-19 | Q807 | B-5 |
| IC502 | I-18 | Q808 | E-9 |
| IC503 | I-16 | Q809 | B-8 |
| IC504 | H-15 | Q810 | A-8 |
| IC505 | H-16 | | |
| IC601 | J-14 | | |
| IC602 | I-13 | | |
| IC801 | I-8 | | |
| IC802 | G-9 | | |

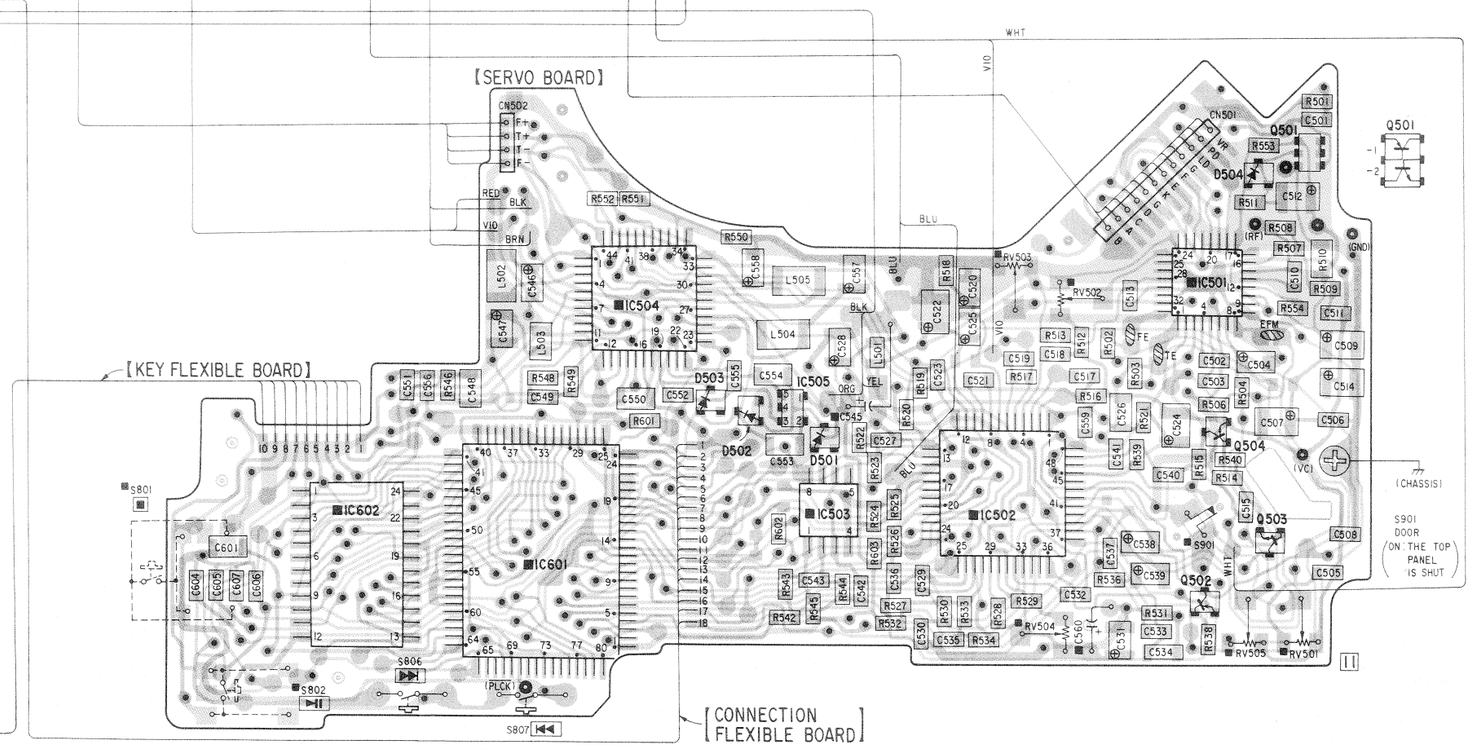


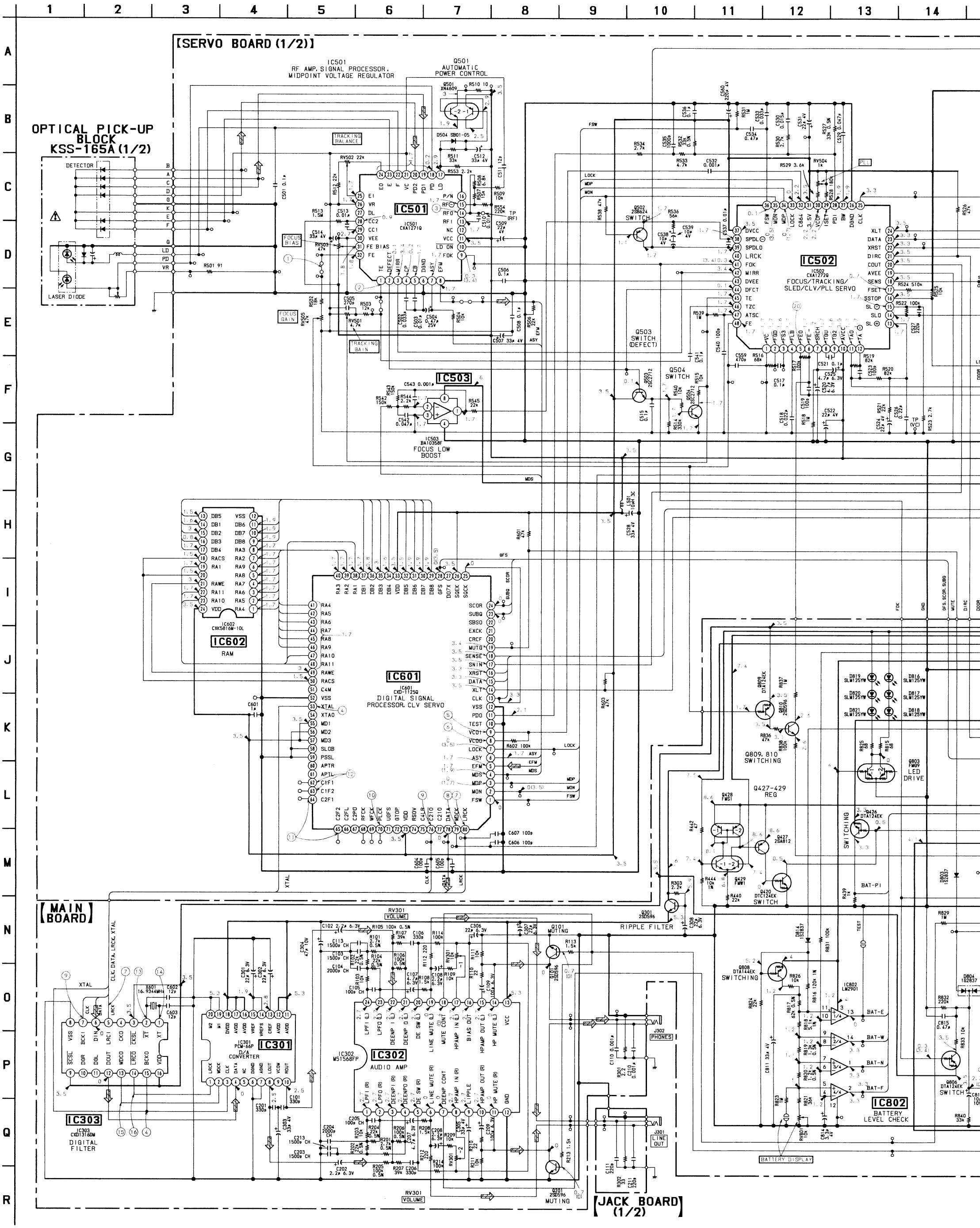

Q807
S808
HOLD
ON — OFF
D818
D817
D816
D819
D820
D821
Q810
Q809
Q805
Q803
D804
D826
D807
D825
D803
Q422
Q301
Q416
Q415
D411
D412
Q426
D485
Q414
D410
Q430
Q431
D802
D801
D810
D813
Q801
D809
Q808
D814
C811
ORG
YEL
VIO
WHT
BLK
RED
BRN
BLU

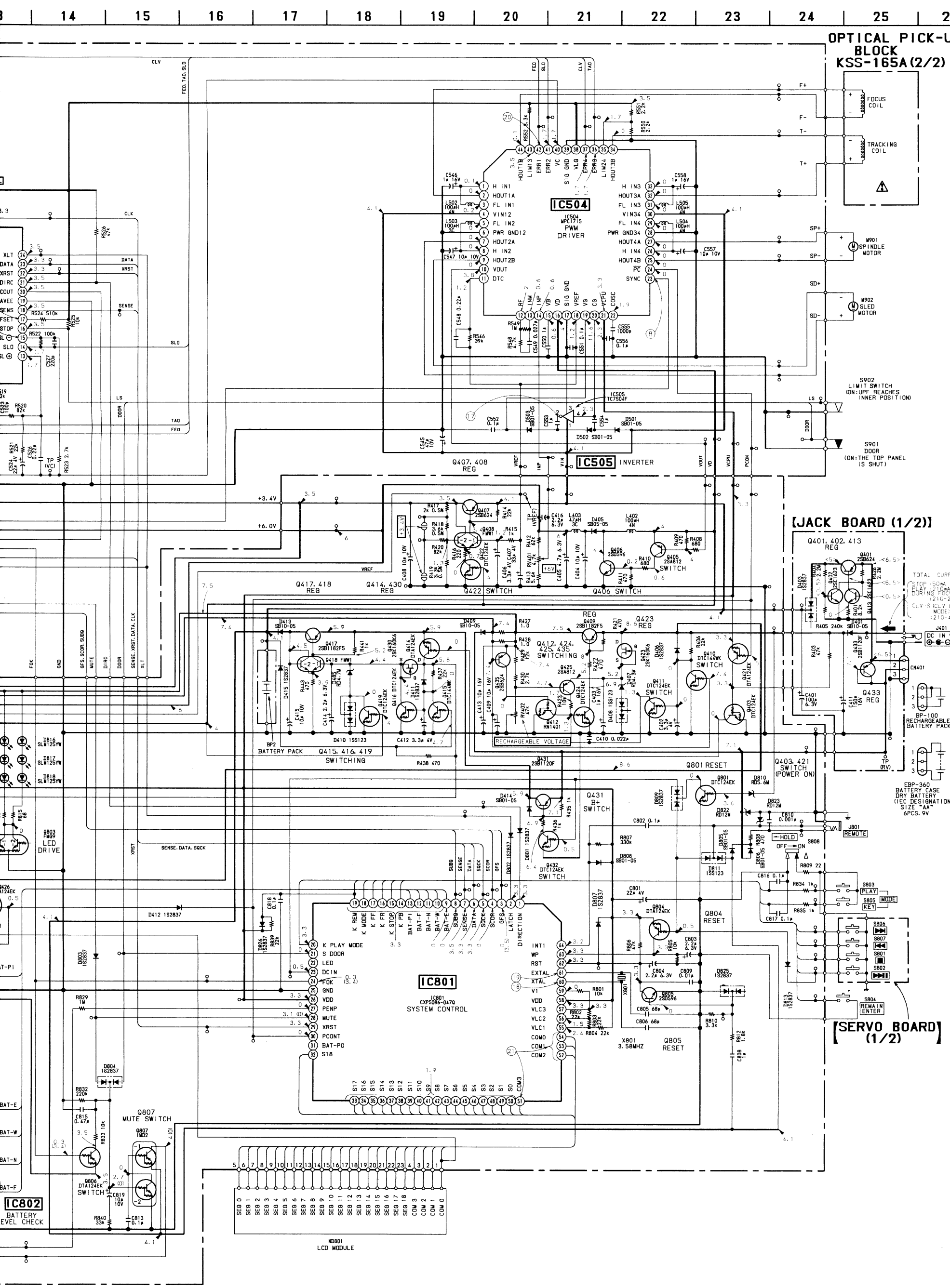

S902
LIMIT SWITCH
(ON:UPE REACHES
INNER POSITON)
M901
SPINDLE
MOTOR
M902
SLED
MOTOR
VIO
RED
BLK
BRN
BLU

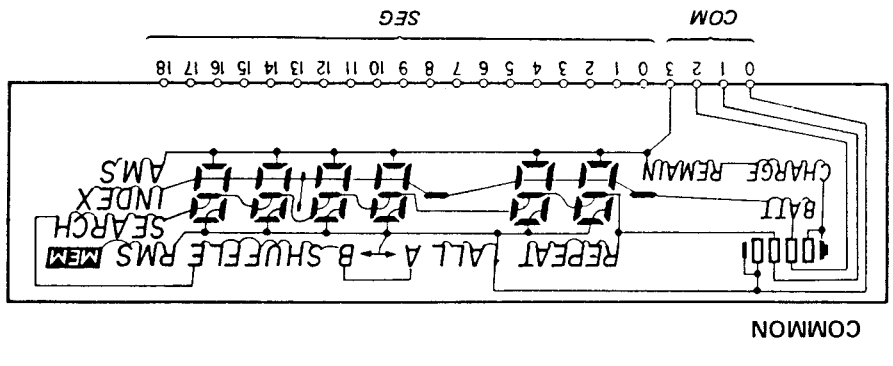

DRY BATTERY
SIZE "AA"
(IEC DESIGNATION R6)
6PCS, 9V
EBP-360
BATTERY CASE
BP-100
RECHARGEABLE
BATTERY PACK
【JACK BOARD】
J301
LINE OUT
J401
DC IN 9V
(CHASSIS)
CN401
BATTERY
TERMINAL
Q433
Q402
Q413
Q401
D403
D401
(R.V)
BLK
RED
BP-2
BATTERY PACK

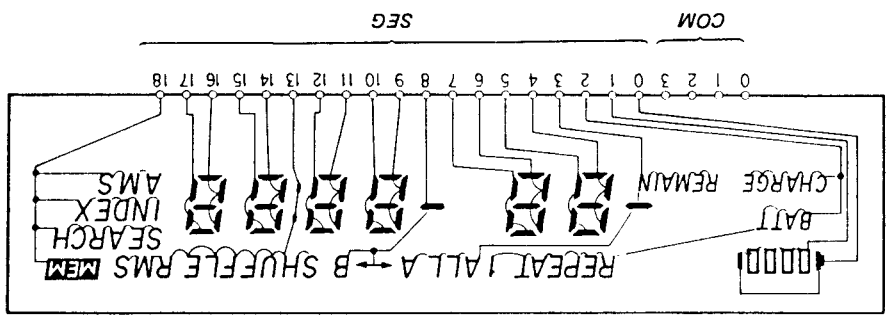

D]【SIDE A)
Q429
Q428
D406
D409
Q410
Q411
Q427
Q423
Q403
Q420
Q421
Q424
Q425
Q435
Q412
Q419
(VREF) (3.4V)
(6V)
IC303
IC301
IC801
IC802
(TEST)
D405
Q406
Q405
D808
D811
D823
D822
D805
D806
Q804
J801
REMOTE
(CHASSIS)
ND801
LCD MODULE


【SERVO BOARD】
【KEY FLEXIBLE BOARD】
【CONNECTION
FLEXIBLE BOARD】
CN502
CN501
IC504
IC505
IC602
IC601
IC503
IC502
IC501
D503
D502
D501
D504
Q501
Q504
Q503
Q502
S801
S802
S806
S807
S901
DOOR
(ON THE TOP
PANEL
IS SHUT)
(CHASSIS)
(VC)
(GND)
EFM
TE
FE
(RF)
RV501
RV502
RV503
RV504
RV505
WHT
VIO
BLU
BLK
RED
BRN
YEL
ORG


[SERVO BOARD (1/2)]
OPTICAL PICK-UP BLOCK KSS-165A (1/2)
DETECTOR
LASER DIODE
IC501
RF AMP, SIGNAL PROCESSOR, MIDPOINT VOLTAGE REGULATOR
IC501 CXA1271Q
Q501 AUTOMATIC POWER CONTROL
Q501 XN4609
D504 SB01-05
TRACKING BALANCE
FOCUS BIAS
FOCUS GAIN
TRACKING GAIN
IC503
IC503 BA10358F
FOCUS LOW BOOST
IC502
IC502 CXA1272Q
FOCUS/TRACKING/ SLED/CLV/PLL SERVO
Q502 2SB624 SWITCH
Q503 SWITCH (DEFECT)
Q504 SWITCH
PLL
LOCK
MDP
MON
FSW
IC602
IC602 CXK5816M-10L
RAM
IC601
IC601 CXD-1125Q
DIGITAL SIGNAL PROCESSOR, CLV SERVO
Q809, 810 SWITCHING
Q427-429 REG
Q803 FMG9 LED DRIVE
D819 SLM125YW
D820 SLM125YW
D821 SLM125YW
D816 SLM125YW
D817 SLM125YW
D818 SLM125YW
[MAIN BOARD]
IC303
IC303 CXD1316DM
DIGITAL FILTER
IC301
IC301 PCM-66P D/A CONVERTER
IC302
IC302 M51568FP
AUDIO AMP
RV301 VOLUME
Q101 MUTING
Q201 2SD596 MUTING
RIPPLE FILTER
Q301 2SD596
J302 PHONES
J301 LINE OUT
IC802
IC802 LM2901
BATTERY LEVEL CHECK
BATTERY DISPLAY
Q808 DTA144EK SWITCHING
Q806 DTA124EK SWITCH
Q420 DTC124EK SWITCH
Q426 DTA124EK SWITCHING
Q427 2SA812
Q428 FMS1
Q429 FMW1
BAT-P1
BAT-E
BAT-W
BAT-N
BAT-F
[JACK BOARD (1/2)]


OPTICAL PICK-UP BLOCK KSS-165A(2/2)
FOCUS COIL
TRACKING COIL
M901 SPINDLE MOTOR
M902 SLED MOTOR
S902 LIMIT SWITCH (ON:UPF REACHES INNER POSITION)
S901 DOOR (ON:THE TOP PANEL IS SHUT)
IC504 PWM DRIVER
IC505 INVERTER
IC505 TC7S04F
Q407, 408 REG
Q417, 418 REG
Q414, 430 REG
Q422 SWITCH
Q406 SWITCH
Q423 REG
Q412, 424, 425, 435 SWITCHING
Q415, 416, 419 SWITCHING
Q431 B+ SWITCH
Q432 SWITCH
Q801 RESET
Q403, 421 SWITCH (POWER ON)
Q804 RESET
Q805 RESET
Q807 MUTE SWITCH
Q806 SWITCH
Q803 LED DRIVE
IC802 BATTERY LEVEL CHECK
IC801 CXP5086-047Q SYSTEM CONTROL
X801 3.58MHZ
ND801 LCD MODULE
[JACK BOARD (1/2)]
Q401, 402, 413 REG
Q433 REG
TOTAL CURRENT (STOP :50mA PLAY :210mA DURING FOCUS SEARCH :210-280mA CLV-S (CLV RUN-UP MODE) :210-410mA)
DC IN 9V
BP-100 RECHARGEABLE BATTERY PACK
EBP-360 BATTERY CASE DRY BATTERY (IEC DESIGNATION R6) SIZE "AA" 6PCS. 9V
BP2 BATTERY PACK
RECHARGEABLE VOLTAGE
[SERVO BOARD (1/2)]
CLV
FED. TAO. SLD
CLK
DATA
XRST
SENSE
SLO
LS
DOOR
TAO
FEO
VREF
SENSE. DATA. SQCK
FOK
GND
GFS. SCOR. SUBQ
MUTE
DIRC
DOOR
SENSE. XRST. DATA. CLK
XLT

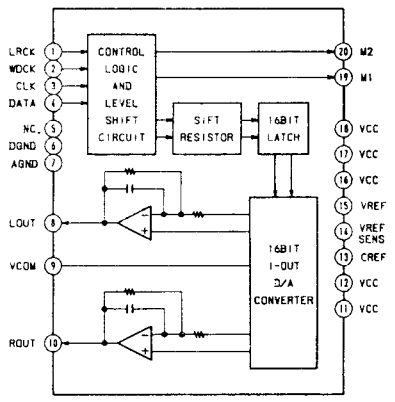


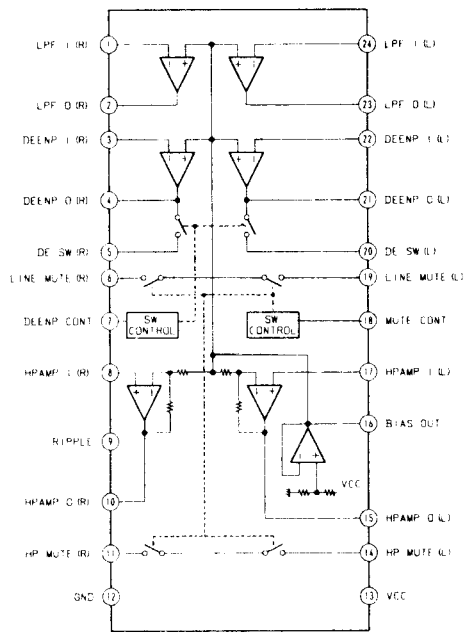

- LCD Module

## 4-5. IC BLOCK DIAGRAM

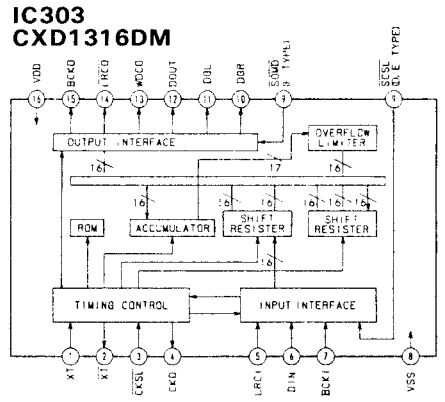
### IC 301
### PCM-66



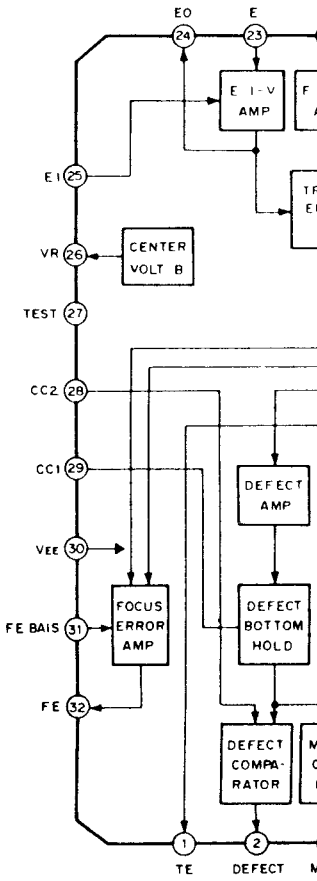

### IC302
### M51568FP



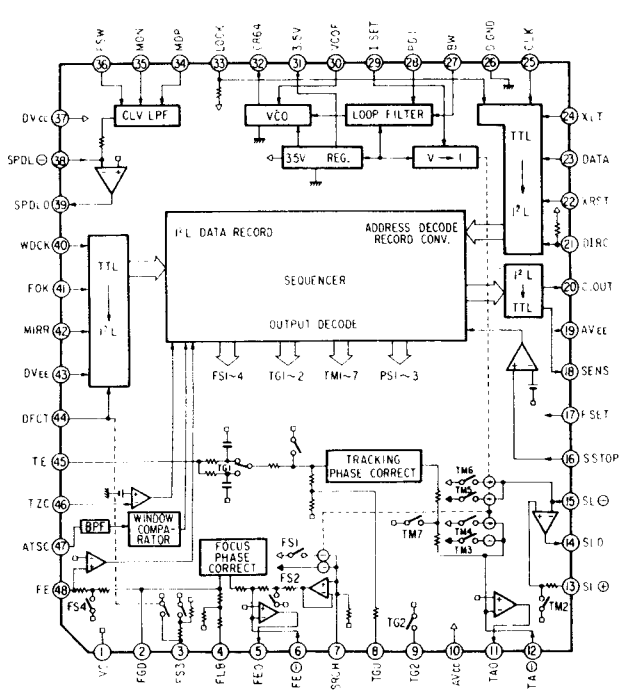

### IC303
### CXD1316DM



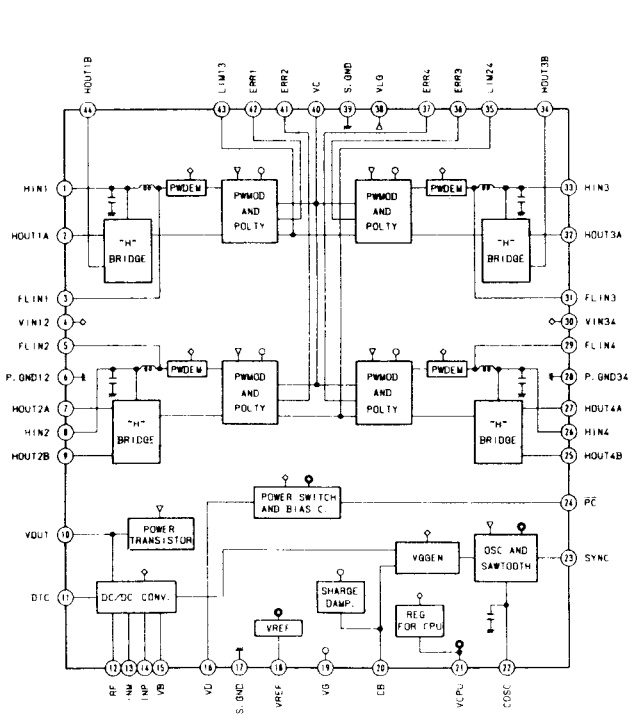

### IC501
### CXA1271Q



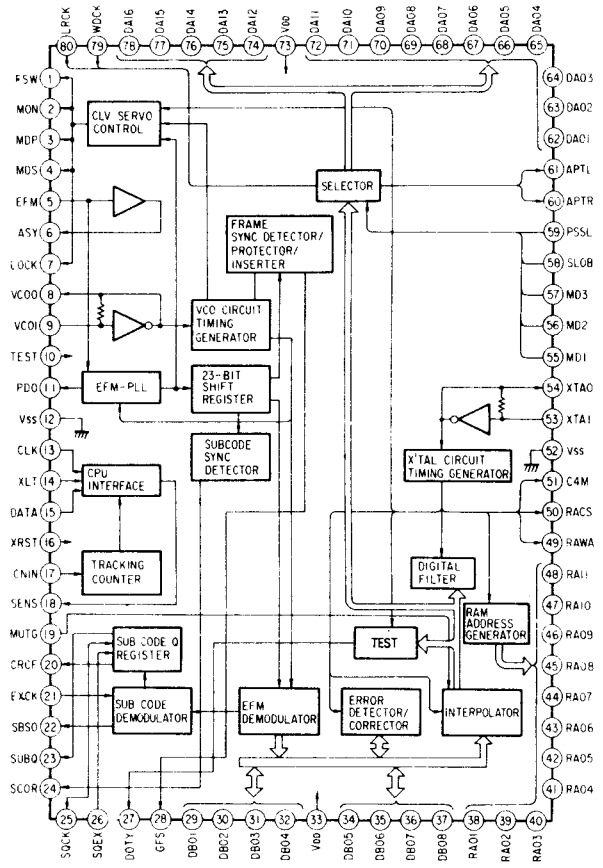

### IC502
### CXA1272Q

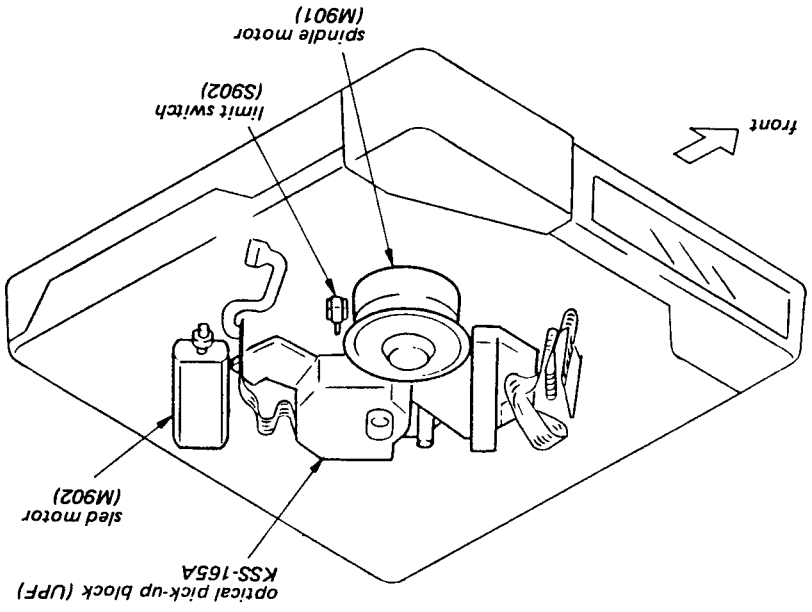


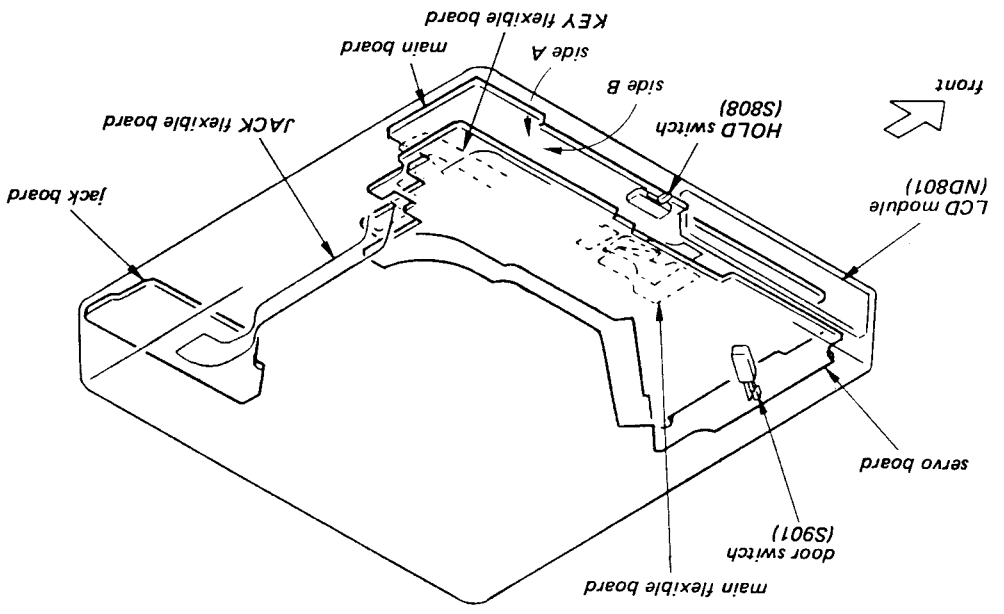

### IC504
### MPC1715



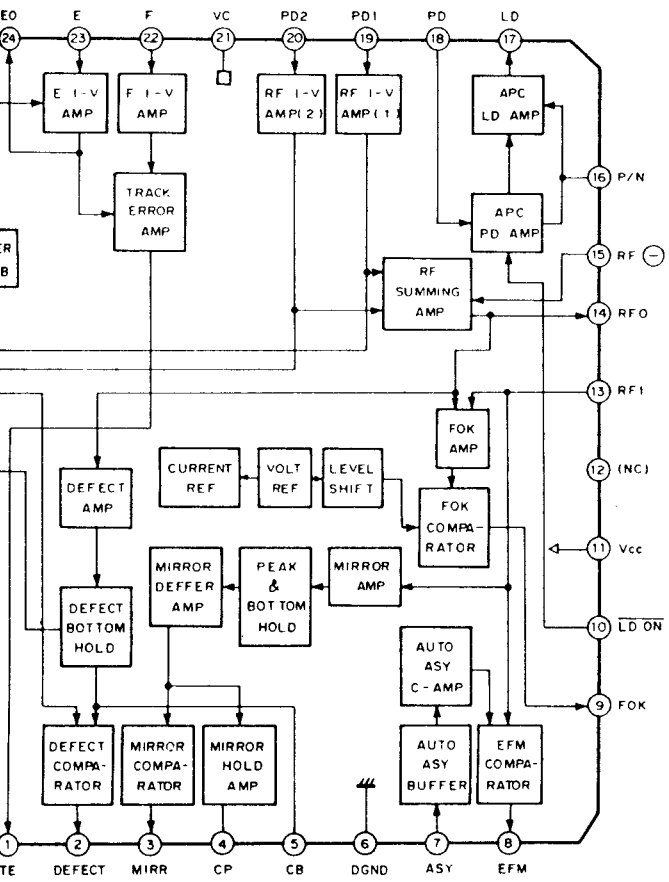

### IC601
### CXD1125Q






● PC Board/Switch/Motor Layouts



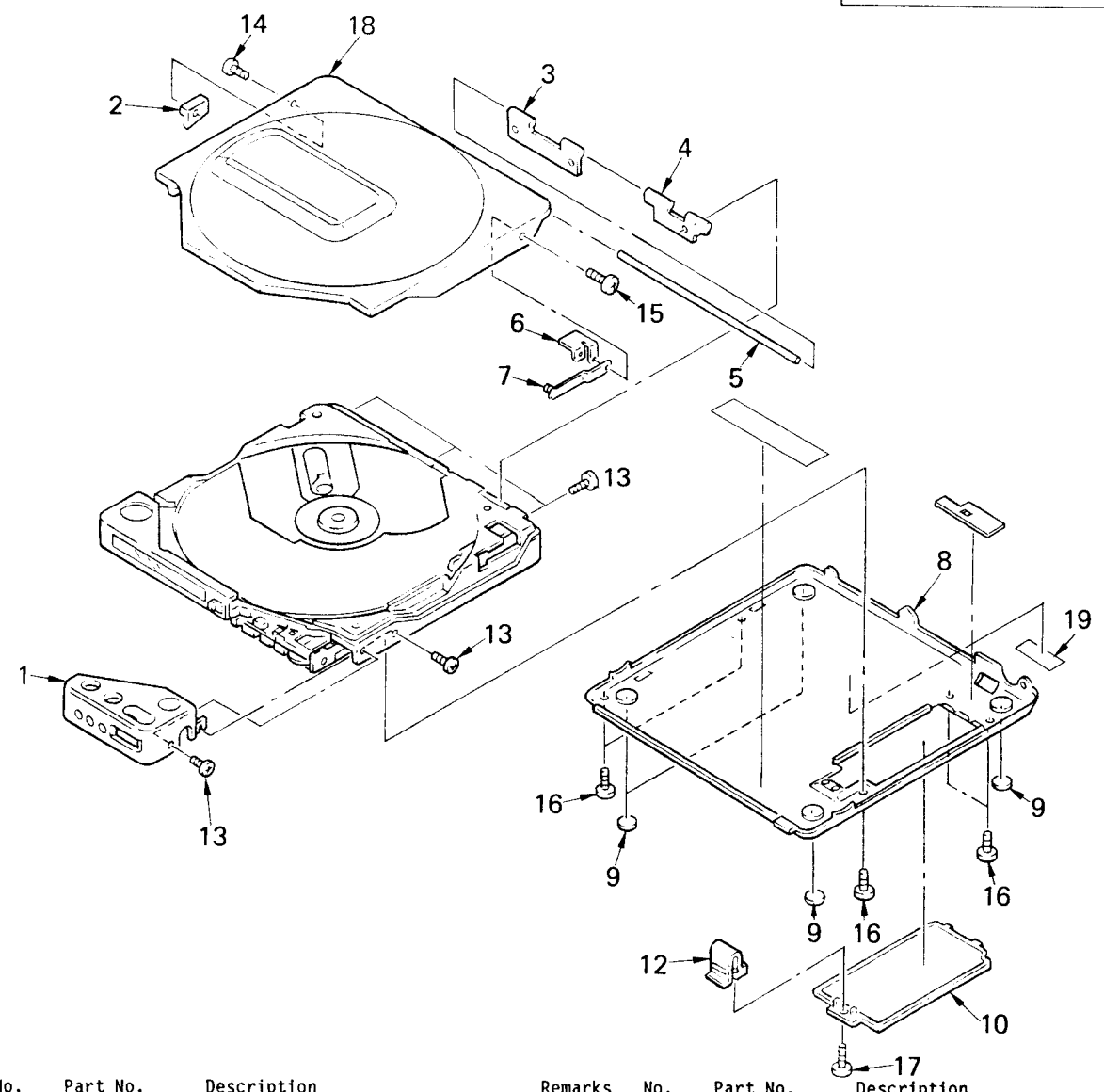

# SECTION 5
# EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. |
|---|
| Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifé. |

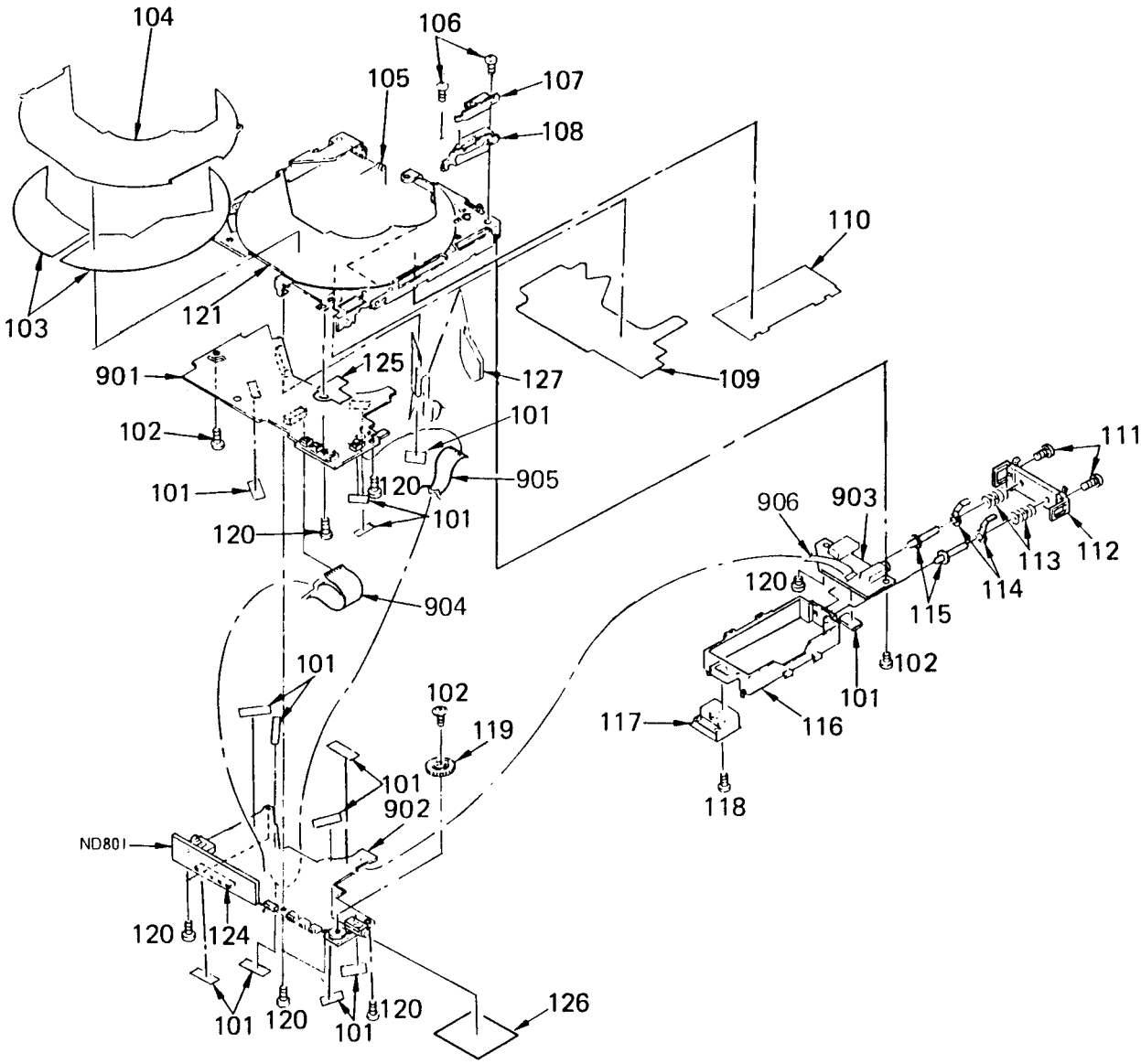
5-1.




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | X-4921-211-1 | (BLACK)...ORNAMENT ASSY (BLACK), BUTTON | |
| | X-4921-235-1 | (TITAN)...ORNAMENT ASSY (TITAN), BUTTON | |
| 2 | 4-920-272-01 | RETAINER, SPRING, SWITCHING | |
| 3 | 4-924-142-01 | (BLACK)...HINGE (LEFT) | |
| | 4-924-142-11 | (TITAN)...HINGE (LEFT) | |
| 4 | 4-924-143-01 | (BLACK)...HINGE (RIGHT) | |
| | 4-924-143-11 | (TITAN)...HINGE (RIGHT) | |
| 5 | 4-924-144-01 | SHAFT, FULCRUM | |
| 6 | X-4917-704-1 | BRACKET ASSY, SWITCHING PLATE | |
| 7 | X-4921-216-1 | PLATE (B) ASSY, SWITCHING | |
| 8 | X-4921-231-1 | (BLACK)...PANEL ASSY, BOTTOM | 9 |
| | X-4921-237-1 | (TITAN)...PANEL ASSY (TITAN), BOTTOM | 9 |
| 9 | 4-912-641-01 | FOOT, RUBBER | |
| 10 | 4-924-164-01 | (BLACK)...LID, BATTERY CASE | |
| | 4-924-164-21 | (TITAN)...LID, BATTERY CASE | |

| No. | Part No. | Description | Rem |
|---|---|---|---|
| 12 | 4-924-165-01 | CHIP, LOCK, BATTERY CASE LID | |
| 13 | 3-703-816-71 | (TITAN)...SCREW (M1.4X3.0), SPECIAL | |
| | 3-703-816-72 | (BLACK)...SCREW (M1.4X3.0), SPECIAL | |
| 14 | 3-895-823-41 | (BLACK)...SCREW (B1.4X4), TAPPING | |
| | 3-895-823-51 | (TITAN)...SCREW (B1.4X4), TAPPING | |
| 15 | 3-703-816-01 | (TITAN)...SCREW (M1.4X2.0), SPECIAL | |
| | 3-703-816-02 | (BLACK)...SCREW (M1.4X2.0), SPECIAL | |
| 16 | 3-703-816-41 | (TITAN)...SCREW (M1.4X2.5), SPECIAL | |
| | 3-703-816-42 | (BLACK)...SCREW (M1.4X2.5), SPECIAL | |
| 17 | 3-318-203-71 | (BLACK)...SCREW (B1.7X5), TAPPING | |
| | 3-318-203-72 | (TITAN)...SCREW (B1.7X5), TAPPING | |
| 18 | A-3043-233-A | (BLACK)...PANEL, UPPER | |
| | A-3043-238-A | (TITAN)...PANEL, UPPER | |
| 19 | 4-885-838-00 | (AEP,UK)...LABEL, CLASS 1 | |

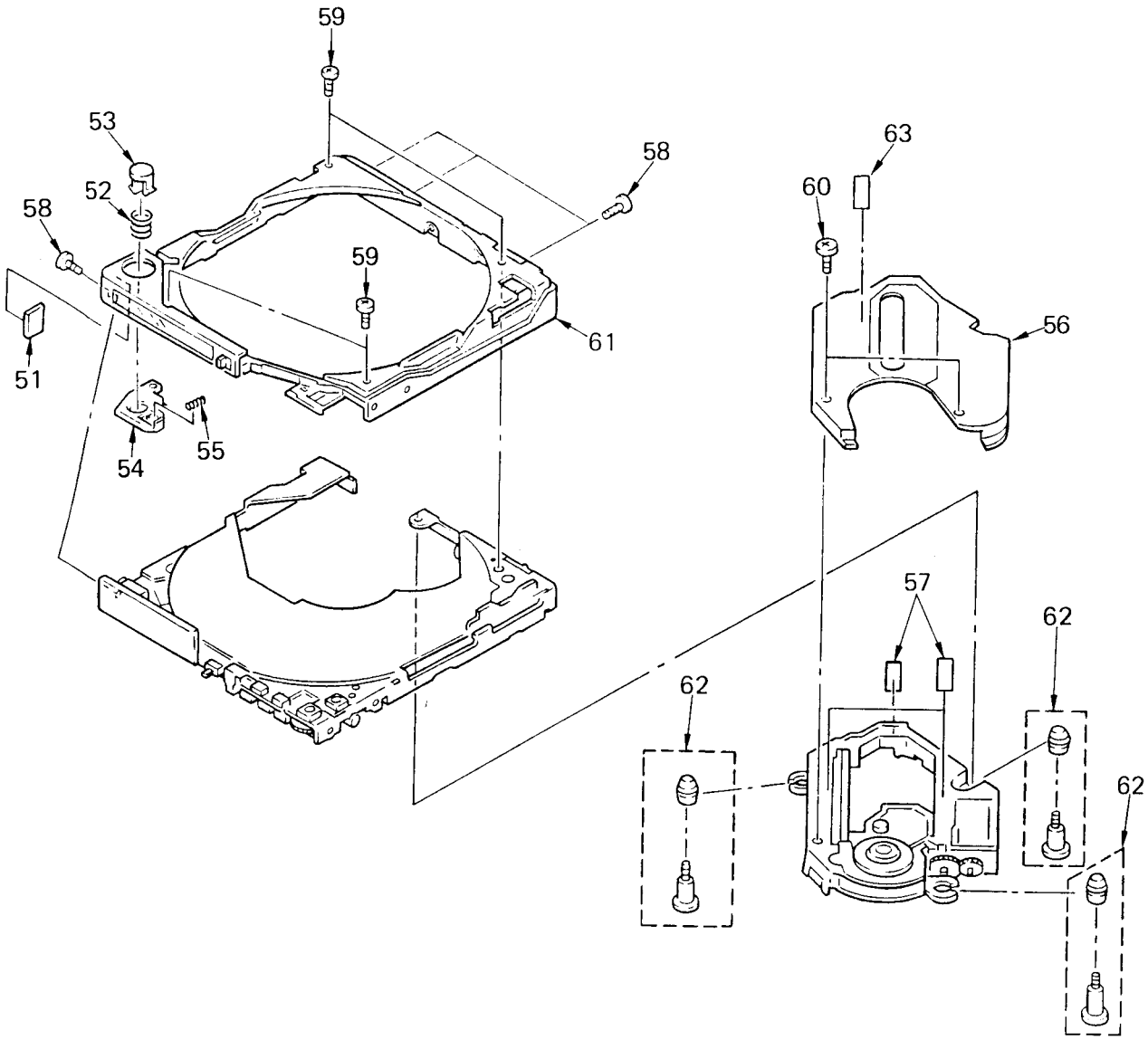
5-3.




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 101 | 3-831-441-XX | CUSHION, SPEAKER | |
| 102 | 3-335-797-21 | SCREW (M1.4X3), TOOTHED LOCK | |
| 103 | 4-924-139-01 | SHEET, ADHESIVE, CHASSIS COVER | |
| 104 | 4-924-138-01 | COVER, CHASSIS | |
| 105 | 4-917-745-01 | SPRING | |
| 106 | 3-703-816-02 | SCREW (M1.4X2.0), SPECIAL HEAD | |
| 107 | *4-917-753-01 | SPRING | |
| 108 | 4-917-751-01 | PLATE, SLIDE, SWITCHING PLATE | |
| 109 | *4-924-141-01 | SHEET, INSULATING, PC BOARD | |
| 110 | *4-924-145-01 | SHEET, CASE (LOWER) | |
| 111 | 3-318-203-62 | SCREW (B1.7X4), TAPPING | |
| 112 | 4-924-134-01 | CHIP, HOLDING, TERMINAL | |
| 113 | 4-924-136-01 | SPRING, COMPRESSION | |
| 114 | 4-924-137-01 | PLATE, CONNECTION | |
| 115 | 4-924-135-01 | PIN, TERMINAL | |
| 116 | 4-924-169-01 | CASE, BATTERY | |
| 117 | 4-924-133-01 | CHIP, FIXED, BOTTOM PANEL | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 118 | 3-703-816-42 | SCREW (M1.4X2.5), SPECIAL HEAD | |
| 119 | 4-924-155-01 | KNOB, VOLUME | |
| 120 | 3-703-816-41 | SCREW (M1.4X2.5), SPECIAL HEAD | |
| 121 | *X-4921-210-1 | CHASSIS ASSY, MAIN | |
| 123 | 3-831-441-11 | CUSHION (B) | |
| 124 | *4-924-182-01 | SPACER, LCD | |
| 125 | *4-926-105-01 | SHEET, INSULATING, SERVO PCB | |
| 126 | *4-926-102-01 | COVER (A), FLEXIBLE INSULATING | |
| 127 | *A-3039-683-A | PAPER (B) ASSY, SHIELD | |
| 901 | *A-3015-732-A | PC BOARD ASSY, SERVO | |
| 902 | *A-3015-733-A | PC BOARD ASSY, MAIN | |
| 903 | *1-629-281-11 | PC BOARD, JACK | |
| 904 | 1-625-584-11 | PC BOARD, CONNECTION FLEXIBLE | |
| 905 | 1-625-585-11 | PC BOARD, KEY SWITCH FLEXIBLE | |
| 906 | 1-625-586-11 | PC BOARD, JACK FLEXIBLE | |
| ND801 | 1-808-290-11 | LCD MODULE | |

5-2.




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 51 | 9-911-840-XX | CUSHION, LID | |
| 52 | 4-917-727-01 | SPRING, COMPRESSION | |
| 53 | 4-924-130-01 | (BLACK)...BUTTON, OPEN | |
| | 4-924-130-21 | (TITAN)...BUTTON, OPEN | |
| 54 | 4-924-131-01 | LEVER, LOCK | |
| 55 | 4-924-140-01 | SPRING, COMPRESSION | |
| 56 | 4-926-141-01 | COVER, MD | |
| 57 | 3-831-441-XX | CUSHION | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 58 | 3-703-816-71 | (TITAN)...SCREW (M1.4X3.0), SPECIAL HEAD | |
| | 3-703-816-72 | (BLACK)...SCREW (M1.4X3.0), SPECIAL HEAD | |
| 59 | 3-703-816-21 | (BLACK)...SCREW (M1.4X5.0), SPECIAL HEAD | |
| | 3-703-816-22 | (TITAN)...SCREW (M1.4X5.0), SPECIAL HEAD | |
| 60 | 3-895-823-11 | SCREW (B1.4X3), TAPPING | |
| 61 | X-4921-217-1 | (BLACK)...CABINET ASSY | |
| | X-4921-238-1 | (TITAN)...CABINET ASSY | |
| 62 | X-4917-723-1 | INSULATOR ASSY | |
| 63 | 4-908-711-01 | LABEL, CAUTION, LENS | |

# SECTION 6
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

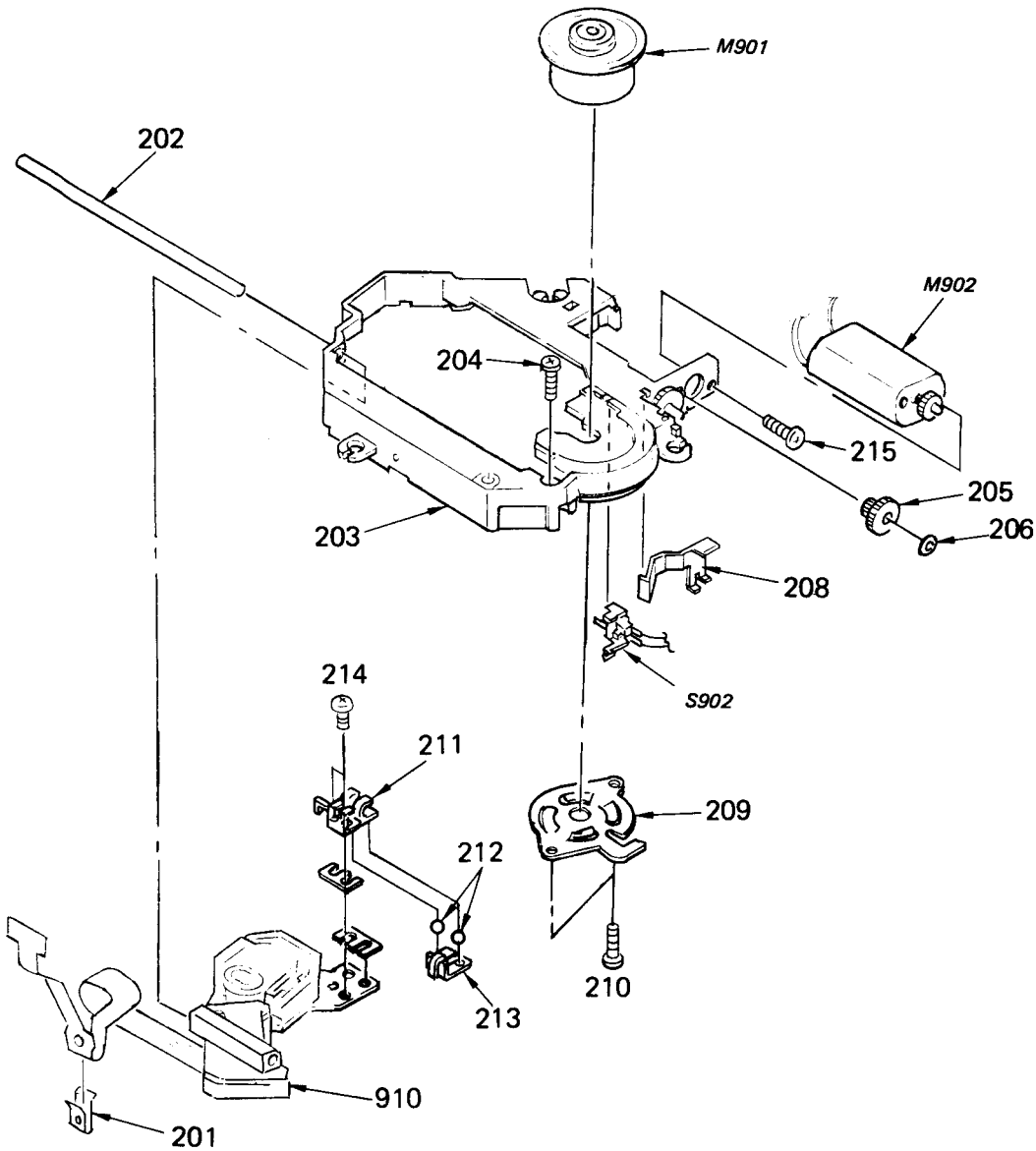
SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No. | Description | | |
|---|---|---|---|---|
| 901 | *A-3015-732-A | PC BOARD ASSY, SERVO | | |
| 902 | *A-3015-733-A | PC BOARD ASSY, MAIN | | |
| 903 | *1-629-281-11 | PC BOARD, JACK | | |
| 904 | 1-625-584-11 | PC BOARD, CONNECTION FLEXIBLE | | |
| 905 | 1-625-585-11 | PC BOARD, KEY SWITCH FLEXIBLE | | |
| 906 | 1-625-586-11 | PC BOARD, JACK FLEXIBLE | | |
| 910 | ⚠8-848-096-11 | DEVICE, OPTICAL KSS-165A | | |
| C101 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C102 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C103 | 1-163-209-00 | CERAMIC CHIP 0.0015MF | 5% | 50V |
| C104 | 1-163-212-00 | CERAMIC CHIP 0.002MF | | 50V |
| C105 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C106 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C107 | 1-135-130-11 | TANTAL. CHIP 4.7MF | 20% | 6.3V |
| C108 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C109 | 1-124-225-00 | ELECT 100MF | 20% | 6.3V |
| C110 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C111 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C113 | 1-163-209-00 | CERAMIC CHIP 0.0015MF | 5% | 50V |
| C201 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C202 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C203 | 1-163-209-00 | CERAMIC CHIP 0.0015MF | 5% | 50V |
| C204 | 1-163-212-00 | CERAMIC CHIP 0.002MF | | 50V |
| C205 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C206 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C207 | 1-135-130-11 | TANTAL. CHIP 4.7MF | 20% | 6.3V |
| C208 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C209 | 1-124-225-00 | ELECT 100MF | 20% | 6.3V |
| C210 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C211 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C213 | 1-163-209-00 | CERAMIC CHIP 0.0015MF | 5% | 50V |
| C301 | 1-135-161-21 | TANTAL. CHIP 22MF | 20% | 6.3V |
| C302 | 1-135-161-21 | TANTAL. CHIP 22MF | 20% | 6.3V |
| C303 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C304 | 1-131-381-00 | TANTALUM 47MF | 10% | 10V |
| C305 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C306 | 1-135-161-21 | TANTAL. CHIP 22MF | 20% | 6.3V |
| C307 | 1-135-161-21 | TANTAL. CHIP 22MF | 20% | 6.3V |
| C308 | 1-135-161-21 | TANTAL. CHIP 22MF | 20% | 6.3V |
| C401 | 1-124-225-00 | ELECT 100MF | 20% | 6.3V |
| C402 | 1-135-103-00 | TANTAL. CHIP 3.3MF | 20% | 4V |
| C403 | 1-135-091-00 | TANTAL. CHIP 1MF | 20% | 16V |
| C404 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| C405 | 1-135-130-11 | TANTAL. CHIP 4.7MF | 20% | 6.3V |
| C406 | 1-135-103-00 | TANTAL. CHIP 3.3MF | 20% | 4V |
| C407 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C408 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| C409 | 1-135-159-21 | TANTAL. CHIP 10MF | 20% | 16V |
| C410 | 1-163-037-11 | CERAMIC CHIP 0.022MF | 10% | 25V |
| C411 | 1-126-357-11 | ELECT 150MF | 20% | 16V |
| C412 | 1-135-103-00 | TANTAL. CHIP 3.3MF | 20% | 4V |
| C413 | 1-131-365-00 | TANTALUM 10MF | 10% | 16V |
| C414 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C415 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| C416 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C501 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C502 | 1-163-989-11 | CERAMIC CHIP 0.033MF | 10% | 25V |
| C503 | 1-163-021-00 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C504 | 1-135-145-11 | TANTAL. CHIP 0.47MF | 20% | 25V |
| C505 | 1-163-127-00 | CERAMIC CHIP 270PF | 5% | 50V |
| C506 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C507 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C508 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C509 | 1-135-157-21 | TANTAL. CHIP 22MF | 20% | 4V |
| C510 | 1-163-021-00 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C511 | 1-163-095-00 | CERAMIC CHIP 12PF | 5% | 50V |
| C512 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C513 | 1-163-021-00 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C514 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C515 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C517 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C518 | 1-163-037-11 | CERAMIC CHIP 0.022MF | 10% | 25V |
| C519 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C520 | 1-135-130-11 | TANTAL. CHIP 4.7MF | 20% | 6.3V |
| C521 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C522 | 1-135-157-21 | TANTAL. CHIP 22MF | 20% | 4V |
| C523 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C524 | 1-135-157-21 | TANTAL. CHIP 22MF | 20% | 4V |
| C525 | 1-135-130-11 | TANTAL. CHIP 4.7MF | 20% | 6.3V |
| C526 | 1-163-081-00 | CERAMIC CHIP 0.22MF | | 25V |
| C527 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C528 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C529 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V |
| C530 | 1-163-023-00 | CERAMIC CHIP 0.015MF | 10% | 50V |
| C531 | 1-135-157-21 | TANTAL. CHIP 22MF | 20% | 4V |
| C532 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C533 | 1-163-989-11 | CERAMIC CHIP 0.033MF | 10% | 25V |
| C534 | 1-162-637-11 | CERAMIC CHIP 0.47MF | | 16V |
| C535 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C536 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C537 | 1-163-021-00 | CERAMIC CHIP 0.01MF | 10% | 50V |

## 5-4. MECHANISM SECTION (CDM-150)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 201 | 4-917-622-01 | RETAINER, FLEXIBLE | |
| 202 | 4-917-611-01 | SHAFT (A) | |
| 203 | X-4917-725-1 | CHASSIS ASSY, MD | |
| 204 | 4-921-299-01 | SCREW (1.7X8), SPECIAL | |
| 205 | 4-921-292-01 | GEAR (B) | |
| 206 | 3-315-384-11 | WASHER, STOPPER | |
| 208 | 4-921-290-01 | SPRING | |
| 209 | 4-921-287-01 | BRACKET, MOTOR | |
| 210 | 4-912-432-01 | SCREW (B1.4X5), TAPPING | |
| 211 | 4-921-294-01 | RACK (A) | |
| 212 | 7-671-111-11 | STEEL, BOUL 1.5MM | |
| 213 | 4-921-296-01 | SPRING | |
| 214 | 7-627-552-38 | SCREW, PRECISION +P 1.7X3 | |
| 215 | 7-627-553-38 | SCREW, PRECISION +P 2X3 | |
| 910 | ⚠ .8-848-096-11 | DEVICE, OPTICAL KSS-165A | |
| M901 | A-3133-335-A | MOTOR ASSY, CLV (SPINDLE MOTOR) | |
| M902 | A-3133-334-A | MOTOR SUB ASSY, FEED (SLED MOTOR) | |
| S902 | 1-571-099-11 | SWITCH (LIMIT) | |

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No. | Description | | |
|---|---|---|---|---|
| C538 | 1-135-157-21 | TANTAL. CHIP 10MF | 20% | 4V |
| C539 | 1-135-157-21 | TANTAL. CHIP 10MF | 20% | 4V |
| C540 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C541 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C542 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V |
| C543 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C545 | 1-131-381-00 | TANTALUM 47MF | 10% | 10V |
| C546 | 1-135-091-00 | TANTAL. CHIP 1MF | 20% | 16V |
| C547 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| C548 | 1-163-081-00 | CERAMIC CHIP 0.22MF | | 25V |
| C549 | 1-163-986-00 | CERAMIC CHIP 0.027MF | 10% | 25V |
| C550 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C551 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C552 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C553 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C554 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C555 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C556 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C557 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| C558 | 1-135-091-00 | TANTAL. CHIP 1MF | 20% | 16V |
| C559 | 1-163-133-00 | CERAMIC CHIP 470PF | 5% | 50V |
| C560 | 1-124-576-11 | ELECT 220MF | 20% | 4V |
| C601 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C602 | 1-163-095-00 | CERAMIC CHIP 12PF | 5% | 50V |
| C603 | 1-163-095-00 | CERAMIC CHIP 12PF | 5% | 50V |
| C604 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C605 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C606 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C607 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C801 | 1-135-157-21 | TANTAL. CHIP 22MF | 20% | 4V |
| C802 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C803 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C804 | 1-135-149-21 | TANTAL. CHIP 2.2MF | 20% | 6.3V |
| C805 | 1-163-113-00 | CERAMIC CHIP 68PF | 5% | 50V |
| C806 | 1-163-113-00 | CERAMIC CHIP 68PF | 5% | 50V |
| C808 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C809 | 1-163-021-00 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C810 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C811 | 1-135-162-21 | TANTAL. CHIP 33MF | 20% | 4V |
| C813 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C814 | 1-135-103-00 | TANTAL. CHIP 3.3MF | 20% | 4V |
| C815 | 1-162-637-11 | CERAMIC CHIP 0.47MF | | 16V |
| C816 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C817 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C818 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C819 | 1-135-174-11 | TANTAL. CHIP 10MF | 20% | 10V |
| CN401 | 1-535-608-21 | TERMINAL, BATTERY | | |
| CN501 | 1-563-546-11 | HOUSING, CONNECTOR 12P | | |
| CN502 | 1-563-552-11 | SOCKET, CONNECTOR 4P | | |
| D401 | 8-719-938-78 | DIODE SB10-05PCP | | |
| D403 | 8-719-100-05 | DIODE 1S2837 | | |
| D405 | 8-719-938-75 | DIODE SB05-05CP | | |
| D406 | 8-719-100-05 | DIODE 1S2837 | | |
| D407 | 8-719-105-63 | DIODE RD4.3M-B1 | | |
| D408 | 8-719-800-76 | DIODE 1SS226 | | |
| D409 | 8-719-938-78 | DIODE SB10-05PCP | | |
| D410 | 8-719-800-76 | DIODE 1SS226 | | |
| D411 | 8-719-100-05 | DIODE 1S2837 | | |

| Ref.No. | Part No. | Description | | |
|---|---|---|---|---|
| D412 | 8-719-100-05 | DIODE 1S2837 | | |
| D413 | 8-719-938-78 | DIODE SB10-05PCP | | |
| D414 | 8-719-938-72 | DIODE SB01-05CP | | |
| D415 | 8-719-100-05 | DIODE 1S2837 | | |
| D485 | 8-719-105-73 | DIODE RD4.7M-B2 | | |
| D501 | 8-719-938-72 | DIODE SB01-05CP | | |
| D502 | 8-719-938-72 | DIODE SB01-05CP | | |
| D503 | 8-719-938-72 | DIODE SB01-05CP | | |
| D504 | 8-719-938-72 | DIODE SB01-05CP | | |
| D801 | 8-719-100-05 | DIODE 1S2837 | | |
| D802 | 8-719-100-05 | DIODE 1S2837 | | |
| D803 | 8-719-100-05 | DIODE 1S2837 | | |
| D804 | 8-719-100-05 | DIODE 1S2837 | | |
| D805 | 8-719-938-72 | DIODE SB01-05CP | | |
| D806 | 8-719-938-72 | DIODE SB01-05CP | | |
| D807 | 8-719-100-05 | DIODE 1S2837 | | |
| D808 | 8-719-938-72 | DIODE SB01-05CP | | |
| D809 | 8-719-100-05 | DIODE 1S2837 | | |
| D810 | 8-719-105-91 | DIODE RD5.6M-B2 | | |
| D811 | 8-719-800-76 | DIODE 1SS226 | | |
| D813 | 8-719-100-03 | DIODE 1S2835 | | |
| D814 | 8-719-100-05 | DIODE 1S2837 | | |
| D816 | 8-719-970-11 | DIODE SLM-125YW | | |
| D817 | 8-719-970-11 | DIODE SLM-125YW | | |
| D818 | 8-719-970-11 | DIODE SLM-125YW | | |
| D819 | 8-719-970-11 | DIODE SLM-125YW | | |
| D820 | 8-719-970-11 | DIODE SLM-125YW | | |
| D821 | 8-719-970-11 | DIODE SLM-125YW | | |
| D822 | 8-719-106-70 | DIODE RD12M-B1 | | |
| D823 | 8-719-106-70 | DIODE RD12M-B1 | | |
| D825 | 8-719-100-05 | DIODE 1S2837 | | |
| D826 | 8-719-100-05 | DIODE 1S2837 | | |
| IC301 | 8-759-983-79 | IC PCM-66P | | |
| IC302 | 8-759-630-75 | IC M51568FP | | |
| IC303 | 8-759-946-27 | IC CXD1316DM | | |
| IC501 | 8-752-033-55 | IC CXA1271Q | | |
| IC502 | 8-752-033-54 | IC CXA1272Q-Z | | |
| IC503 | 8-759-970-89 | IC BA10358F | | |
| IC504 | 8-759-030-17 | IC MPC1715FU | | |
| IC505 | 8-759-230-43 | IC TC7S04F | | |
| IC601 | 8-759-947-02 | IC CXD1125Q | | |
| IC602 | 8-752-323-65 | IC CXK5816M-15L | | |
| IC801 | 8-752-808-85 | IC CXP5086-047Q | | |
| IC802 | 8-759-700-90 | IC NJM2901M | | |
| J301 | 1-563-280-21 | JACK (LINE OUT) | | |
| J302 | 1-563-280-11 | JACK (PHONES) | | |
| J401 | 1-562-961-11 | JACK (DC IN 9V) | | |
| J801 | 1-563-280-31 | JACK (REMOTE) | | |
| JR802 | 1-216-296-00 | METAL GLAZE 0 | 5% | 1/8W |
| JR804 | 1-216-296-00 | METAL GLAZE 0 | 5% | 1/8W |
| L402 | 1-412-142-11 | INDUCTOR CHIP 100UH | | |
| L403 | 1-412-031-11 | INDUCTOR CHIP 47UH | | |
| L501 | 1-412-029-11 | INDUCTOR CHIP 10UH | | |
| L502 | 1-412-142-11 | INDUCTOR CHIP 100UH | | |
| L503 | 1-412-032-21 | INDUCTOR CHIP 100UH | | |
| L504 | 1-412-142-11 | INDUCTOR CHIP 100UH | | |
| L505 | 1-412-142-11 | INDUCTOR CHIP 100UH | | |

| Ref.No. | Part No. | Description |
|---|---|---|
| M901 | A-3133-335-A | MOTOR ASSY, CLV (SPINDLE MOTOR) |
| M902 | A-3133-334-A | MOTOR SUB ASSY, FEED (SLED MOTOR) |
| ND801 | 1-808-290-11 | LCD MODULE |
| Q101 | 8-729-159-64 | TRANSISTOR 2SD596 |
| Q201 | 8-729-159-64 | TRANSISTOR 2SD596 |
| Q301 | 8-729-159-64 | TRANSISTOR 2SD596 |
| Q401 | 8-729-162-43 | TRANSISTOR 2SB624-BV3 |
| Q402 | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q403 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q405 | 8-729-100-75 | TRANSISTOR 2SA812-M5 |
| Q406 | 8-729-159-64 | TRANSISTOR 2SD596 |
| Q407 | 8-729-162-43 | TRANSISTOR 2SB624-BV3 |
| Q408 | 8-729-903-10 | TRANSISTOR FMW1 |
| Q409 | 8-729-101-07 | TRANSISTOR 2SB798 |
| Q410 | 8-729-901-03 | TRANSISTOR DTC144WK |
| Q411 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q412 | 8-729-207-55 | TRANSISTOR RN1401 |
| Q413 | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q414 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q415 | 8-729-901-03 | TRANSISTOR DTC144WK |
| Q416 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q417 | 8-729-101-07 | TRANSISTOR 2SB798 |
| Q418 | 8-729-903-10 | TRANSISTOR FMW1 |
| Q419 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q420 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q421 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q422 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q423 | 8-729-116-06 | TRANSISTOR 2SK160-K6 |
| Q424 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q425 | 8-729-100-05 | TRANSISTOR 2SA812-M5 |
| Q426 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q427 | 8-729-100-05 | TRANSISTOR 2SA812-M5 |
| Q428 | 8-729-902-96 | TRANSISTOR FMS1 |
| Q429 | 8-729-903-10 | TRANSISTOR FMW1 |
| Q430 | 8-729-116-06 | TRANSISTOR 2SK160-K6 |
| Q431 | 8-729-101-07 | TRANSISTOR 2SB798 |
| Q432 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q433 | 8-729-101-07 | TRANSISTOR 2SB798 |
| Q435 | 8-729-162-43 | TRANSISTOR 2SB624-BV3 |
| Q501 | 8-729-402-90 | TRANSISTOR XN4609 |
| Q502 | 8-729-162-44 | TRANSISTOR 2SB624-BV4 |
| Q503 | 8-729-271-23 | TRANSISTOR 2SC2712 |
| Q504 | 8-729-271-23 | TRANSISTOR 2SC2712 |
| Q801 | 8-729-901-00 | TRANSISTOR DTC124EK |
| Q803 | 8-729-920-28 | TRANSISTOR FMG9 |
| Q804 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q805 | 8-729-159-64 | TRANSISTOR 2SD596 |
| Q806 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q807 | 8-729-907-39 | TRANSISTOR IMD2 |
| Q808 | 8-729-901-06 | TRANSISTOR DTA144EK |
| Q809 | 8-729-901-05 | TRANSISTOR DTA124EK |
| Q810 | 8-729-159-64 | TRANSISTOR 2SD596 |
| R101 | 1-216-661-11 | METAL CHIP 2.7K 0.50% 1/10W |
| R102 | 1-216-683-11 | METAL CHIP 22K 0.50% 1/10W |
| R103 | 1-216-833-11 | METAL GLAZE 10K 5% 1/16W |
| R104 | 1-216-683-11 | METAL CHIP 22K 0.50% 1/10W |
| R105 | 1-216-699-11 | METAL CHIP 100K 0.50% 1/10W |
| R106 | 1-216-699-11 | METAL CHIP 100K 0.50% 1/10W |

| Ref.No. | Part No. | Description |
|---|---|---|
| R107 | 1-216-748-11 | METAL GLAZE 39K 5% 1/10W |
| R108 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W |
| R109 | 1-216-833-11 | METAL GLAZE 10K 5% 1/16W |
| R110 | 1-216-009-00 | METAL GLAZE 22 5% 1/10W |
| R111 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R112 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W |
| R113 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W |
| R114 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W |
| R201 | 1-216-661-11 | METAL CHIP 2.7K 0.50% 1/10W |
| R202 | 1-216-683-11 | METAL CHIP 22K 0.50% 1/10W |
| R203 | 1-216-833-11 | METAL GLAZE 10K 5% 1/16W |
| R204 | 1-216-683-11 | METAL CHIP 22K 0.50% 1/10W |
| R205 | 1-216-699-11 | METAL CHIP 100K 0.50% 1/10W |
| R206 | 1-216-699-11 | METAL CHIP 100K 0.50% 1/10W |
| R207 | 1-216-748-11 | METAL GLAZE 39K 5% 1/10W |
| R208 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W |
| R209 | 1-216-833-11 | METAL GLAZE 10K 5% 1/16W |
| R210 | 1-216-009-00 | METAL GLAZE 22 5% 1/10W |
| R211 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R212 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W |
| R213 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W |
| R214 | 1-216-845-11 | METAL GLAZE 100K 5% 1/16W |
| R301 | 1-216-298-00 | METAL GLAZE 2.2 5% 1/10W |
| R302 | 1-216-013-00 | METAL GLAZE 33 5% 1/10W |
| R303 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W |
| R401 | 1-216-071-00 | METAL GLAZE 8.2K 5% 1/10W |
| R403 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W |
| R404 | 1-216-129-00 | METAL GLAZE 2.2M 5% 1/10W |
| R405 | 1-216-106-00 | METAL GLAZE 240K 5% 1/10W |
| R406 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |
| R408 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W |
| R409 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R410 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W |
| R411 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R412 | 1-216-092-00 | METAL GLAZE 62K 5% 1/10W |
| R413 | 1-216-067-00 | METAL GLAZE 5.6K 5% 1/10W |
| R414 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |
| R415 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W |
| R416 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W |
| R417 | 1-216-658-11 | METAL CHIP 2K 0.50% 1/10W |
| R418 | 1-216-664-11 | METAL CHIP 3.6K 0.50% 1/10W |
| R419 | 1-216-663-11 | METAL CHIP 3.3K 0.50% 1/10W |
| R420 | 1-216-095-00 | METAL GLAZE 82K 5% 1/10W |
| R421 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R422 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R423 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W |
| R426 | 1-216-129-00 | METAL GLAZE 2.2M 5% 1/10W |
| R427 | 1-217-806-11 | METAL GLAZE 1 5% 1/8W |
| R428 | 1-217-806-11 | METAL GLAZE 1 5% 1/8W |
| R429 | 1-216-075-00 | METAL GLAZE 12K 5% 1/10W |
| R430 | 1-216-059-00 | METAL GLAZE 2.7K 5% 1/10W |
| R435 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W |
| R436 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W |
| R437 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |
| R438 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W |
| R439 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W |
| R440 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R441 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W |
| R442 | 1-216-017-00 | METAL GLAZE | 47 | 5% | 1/10W |
| R443 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R444 | 1-216-324-11 | METAL GLAZE | 10K | 1% | 1/10W |
| R501 | 1-216-024-00 | METAL GLAZE | 91 | 5% | 1/10W |
| R502 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W |
| R503 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W |
| R504 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R506 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R507 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W |
| R508 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W |
| R509 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R510 | 1-216-150-00 | METAL GLAZE | 10 | 5% | 1/8W |
| R511 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W |
| R512 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R513 | 1-216-125-00 | METAL GLAZE | 1.5M | 5% | 1/10W |
| R514 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W |
| R515 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R516 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W |
| R517 | 1-216-845-11 | METAL GLAZE | 100K | 5% | 1/16W |
| R518 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R519 | 1-216-844-11 | METAL GLAZE | 82K | 5% | 1/16W |
| R520 | 1-216-844-11 | METAL GLAZE | 82K | 5% | 1/16W |
| R521 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R522 | 1-216-845-11 | METAL GLAZE | 100K | 5% | 1/16W |
| R523 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W |
| R524 | 1-216-114-00 | METAL GLAZE | 510K | 5% | 1/10W |
| R525 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R526 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R527 | 1-216-687-11 | METAL CHIP | 33K | 0.50% | 1/10W |
| R528 | 1-216-103-00 | METAL GLAZE | 180K | 5% | 1/10W |
| R529 | 1-216-062-00 | METAL GLAZE | 3.6K | 5% | 1/10W |
| R530 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W |
| R531 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R532 | 1-216-687-11 | METAL CHIP | 33K | 0.50% | 1/10W |
| R533 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R534 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W |
| R536 | 1-216-091-00 | METAL GLAZE | 56K | 5% | 1/10W |
| R538 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R539 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R540 | 1-216-833-11 | METAL GLAZE | 10K | 5% | 1/16W |
| R542 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W |
| R543 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W |
| R544 | 1-216-825-11 | METAL GLAZE | 2.2K | 5% | 1/16W |
| R545 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R546 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W |
| R548 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R549 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R550 | 1-216-825-11 | METAL GLAZE | 2.2K | 5% | 1/16W |
| R551 | 1-216-825-11 | METAL GLAZE | 2.2K | 5% | 1/16W |
| R552 | 1-216-827-11 | METAL GLAZE | 3.3K | 5% | 1/16W |
| R553 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W |
| R554 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R601 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R602 | 1-216-845-11 | METAL GLAZE | 100K | 5% | 1/16W |
| R603 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R801 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R802 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R803 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R804 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R805 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R806 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R807 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W |
| R808 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R809 | 1-216-009-00 | METAL GLAZE | 22 | 5% | 1/10W |
| R810 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R812 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W |
| R815 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W |
| R816 | 1-218-163-11 | METAL GLAZE | 120K | 1% | 1/10W |
| R817 | 1-216-694-11 | METAL CHIP | 62K | 0.50% | 1/10W |
| R818 | 1-216-329-11 | METAL GLAZE | 5.1K | 1% | 1/10W |
| R819 | 1-216-654-11 | METAL CHIP | 1.3K | 0.50% | 1/10W |
| R820 | 1-216-653-11 | METAL CHIP | 1.2K | 0.50% | 1/10W |
| R821 | 1-216-086-00 | METAL GLAZE | 36K | 5% | 1/10W |
| R823 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R824 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R825 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W |
| R826 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R829 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R831 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W |
| R832 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R833 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R834 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W |
| R835 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W |
| R836 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W |
| R837 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R838 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W |
| R839 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R840 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W |
| RV301 | 1-237-092-11 | RES, VAR, CARBON 10K/10K (VOLUME) | | | |
| RV401 | 1-237-325-11 | RES, ADJ, METAL GLAZE 4.7K | | | |
| RV402 | 1-237-328-11 | RES, ADJ, METAL GLAZE 47K | | | |
| RV501 | 1-230-869-11 | RES, ADJ, METAL GLAZE 4.7K | | | |
| RV502 | 1-230-871-11 | RES, ADJ, METAL GLAZE 22K | | | |
| RV503 | 1-230-873-11 | RES, ADJ, METAL GLAZE 47K | | | |
| RV504 | 1-237-575-11 | RES, ADJ, METAL GLAZE 1.0K | | | |
| RV505 | 1-230-873-11 | RES, ADJ, METAL GLAZE 47K | | | |
| RV801 | 1-237-143-11 | RES, ADJ, METAL GLAZE 10K | | | |
| S801 | 1-570-909-21 | SWITCH, TACTIL (REFLOW TYPE)(■) | | | |
| S802 | 1-570-909-21 | SWITCH, TACTIL (REFLOW TYPE)(▶/II) | | | |
| S803 | 1-570-204-11 | SWITCH, KEY BOARD (PLAY MODE) | | | |
| S804 | 1-570-204-11 | SWITCH, KEY BOARD (ENTER REMAIN) | | | |
| S805 | 1-570-204-11 | SWITCH, KEY BOARD (KEY MODE) | | | |
| S806 | 1-570-204-11 | SWITCH, KEY BOARD (▶▶I) | | | |
| S807 | 1-570-204-11 | SWITCH, KEY BOARD (I◀◀) | | | |
| S808 | 1-570-397-11 | SWITCH, SLIDE (HOLD) | | | |
| S901 | 1-554-911-11 | SWITCH, LEAF (DOOR) | | | |
| S902 | 1-571-099-11 | SWITCH (LIMIT) | | | |
| X601 | 1-567-737-11 | VIBRATOR, CRYSTAL (16.9344MHz) | | | |
| X801 | 1-577-064-11 | VIBRATOR, CHIP CERAMIC (3.58MHz) | | | |

ACCESSORY & PACKING MATERIAL

| | |
|---|---|
| 1-463-694-11 | (Canadian).....ADAPTOR, AC (AC-930A) |
| 1-463-700-11 | (UK).....ADAPTOR, AC (AC-930A) |
| 1-463-701-11 | (Australian)...ADAPTOR, AC (AC-930A) |
| 1-463-702-11 | (E).....ADAPTOR, AC (AC-950W) |
| 1-463-705-11 | (AEP,Franch)...ADAPTOR, AC (AC-930AEP) |
| 1-463-968-11 | (US).....ADAPTOR, AC (AC-940) |
| 1-526-565-00 | (E)...AC PLUG ADAPTOR |
| 1-528-255-21 | BATTERY PAC (BP-2) |
| 1-555-658-21 | CORD, CONNECTION |
| 2-397-316-01 | (EXCEPT for E)...SHEET, PROTECTION |
| 3-786-975-11 | (AEP,UK,E,Australian,Franch) ...MANUAL, INSTRUCTION |
| 3-786-975-21 | (US,Canadian)...MANUAL, INSTRUCTION |
| 3-786-975-31 | (Canadian).....MANUAL, INSTRUCTION |
| 3-786-975-41 | (AEP).....MANUAL, INSTRUCTION |
| *4-926-125-01 | CUSHION (UPPER) |
| *4-926-126-01 | (US,Canadian,E)....CUSHION (LOWER) |
| *4-926-146-01 | (AEP,UK,Australian,Franch) ...CUSHION (LOWER) |
| *4-926-130-01 | (US).....INDIVIDUAL CARTON |
| *4-926-132-01 | (Canadian).....INDIVIDUAL CARTON |
| *4-926-134-01 | (UK).....INDIVIDUAL CARTON |
| *4-926-137-01 | (AEP,Australian,Franch)...INDIVIDUAL CARTON |
| *4-926-138-01 | (E).....INDIVIDUAL CARTON |
| 4-926-143-01 | CASE, CARRYING |
| 8-952-266-89 | (US,UK,Franch)...HEADPHONE MDR-A10L/A SET |



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